GUIDE TO PORT ENTRY

PORT PLANS AND MOORING DIAGRAMS

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GUIDE TO PORT ENTRY

1983-84

PORT PLANS AND MOORING DIAGRAMS

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WARNING

Every effort has been made to ensure that the information contained in this *Guide* is correct. However, it will be clearly understood that this book is intended as a guide only, that the information cannot be *Guaranteed* correct and that final responsibility must (as always) rest with the Shipmaster.

At certain ports, items of navigational routeings and aids have been included as a means of general guidance only. Shipmasters should have in mind that full and due reference MUST ALWAYS be made to corrected charts of the area, to the appropriate Notices to Mariners, and all or any other navigational notices, warnings or amendments issued by proper Authorities and/or navigational aid services.

The sketch maps are for general assistance and must not be used for navigational purposes. In particular, the shapes of buoys should be disregarded since these are indicated by varying symbols which may be consequent upon local usage and without resemblance to internationally applied symbols.

PLANS

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Shipmasters, Shipowners or Managers, Port Authorities, Administrators and Agents, are earnestly requested to assist our work in up-dating the Guide *by providing written comment, amendments or corrections, plus additional plans of any ports or terminals, to the following address:*

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All communications will be acknowledged and will be most useful, since it is only by this means that the *Guide* will remain of great value to the user, and will be up to date and thoroughly professional in content.

PLANS, DIAGRAMS, DRAWINGS AND SKETCHES: As you will note, this 1983/84 edition of "Guide to Port Entry" contains approx. two thousand port plans and mooring diagrams that have been reproduced from plans and drawings very kindly sent to us by numerous Port Authorities, Agents and shipboard personnel. We hope this plan volume will prove interesting and useful.

Presently however, the plan volume is to an extent incomplete, since there are ports and mooring facilities for which we have not yet received the necessary plans for reproduction purposes. We are anxious to secure plans, diagrams, drawings or sketches of ports and facilities not presently shown in this plan volume, and therefore request that Port Authorities and/or Agents at the places concerned be kind enough to pass us this data together with the necessary permission for reproduction. We would also be very grateful if ship's officers calling at ports not already covered in this plan volume could find it possible to provide us with diagrams or sketches of the facilities which would be suitable for reproduction in our later editions and/or which might be re-drawn as required by our own art department prior to reproduction.

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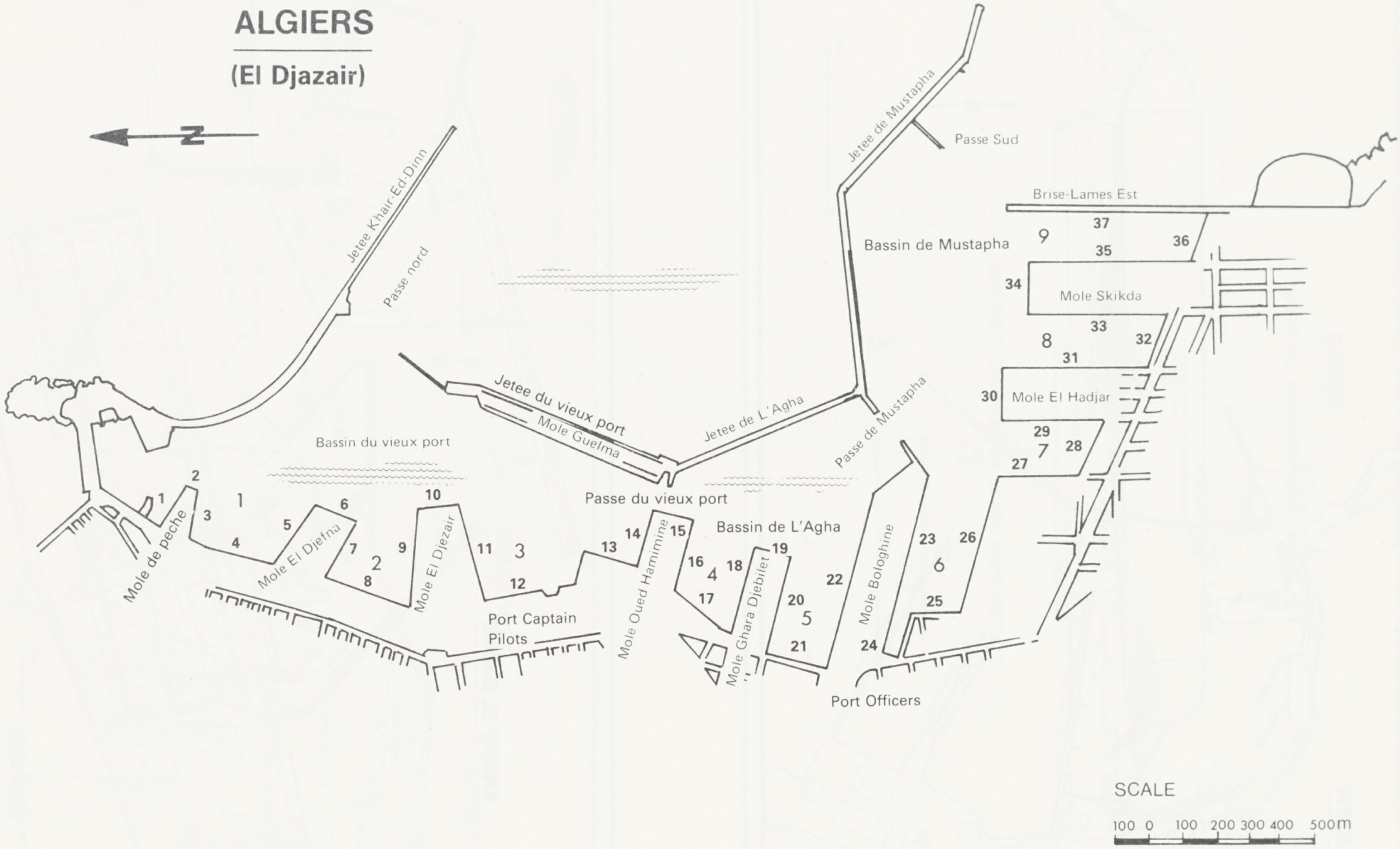
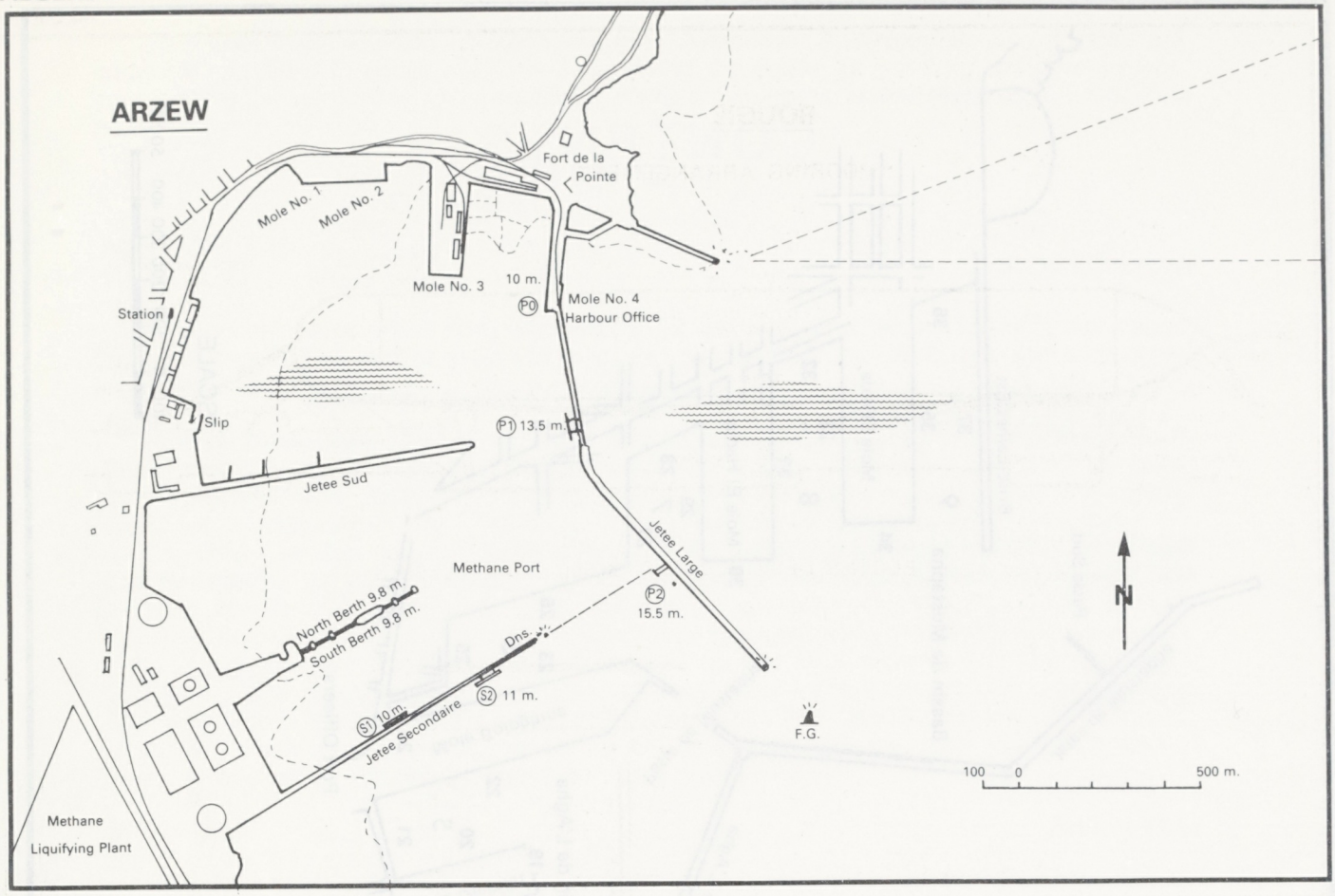
LATE PLANS

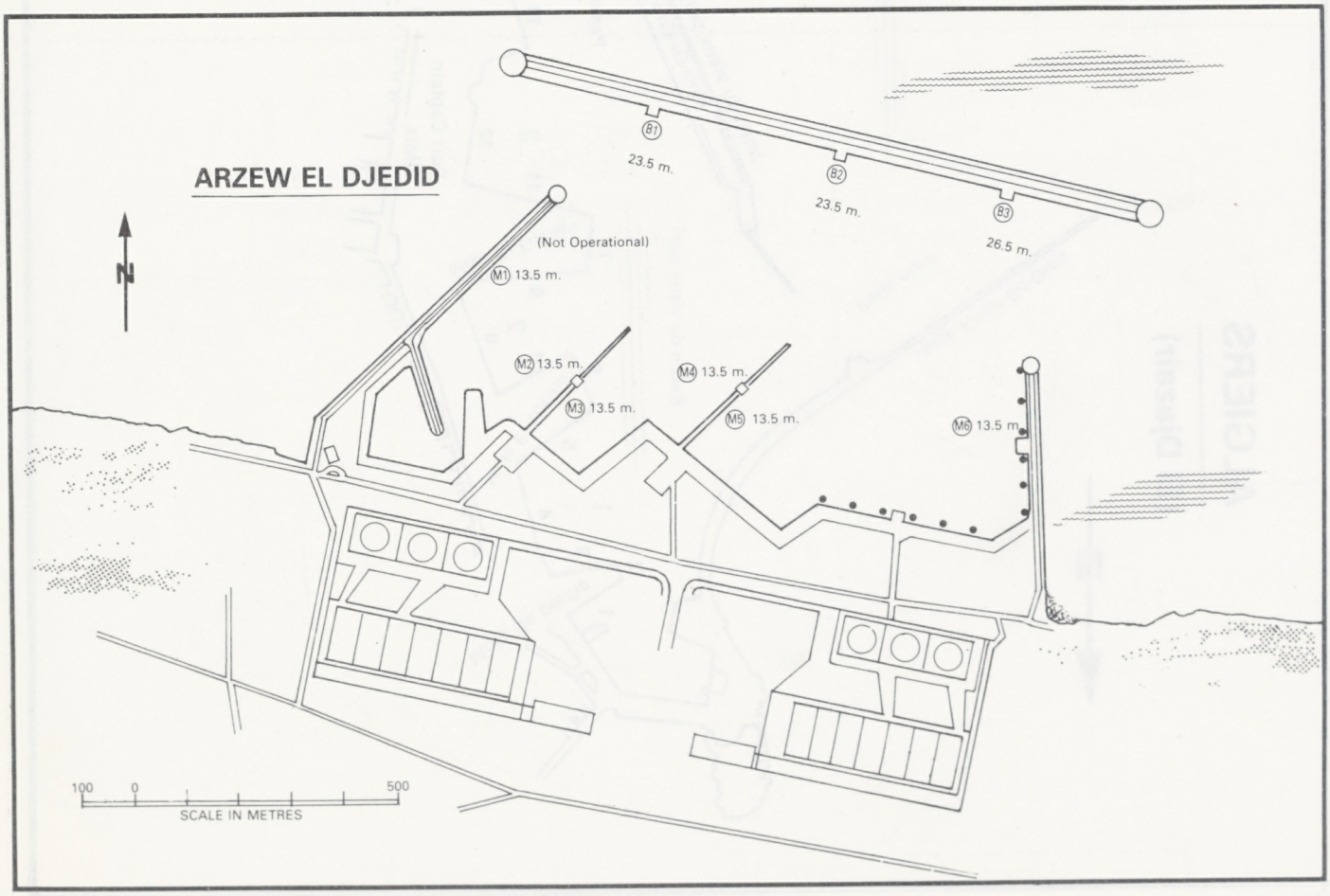
CUBA	Nuevitas	NICARAGUA	Corinto
EGYPT	Port Said	NIGERIA	Brass River
GABON	Port Gentil	PHILIPPINES	Bataan
GUADELOUPE	Basse Terre		Cebu
ITALY	Augusta	SPAIN	Tarragona
	Trieste	UNITED ARAB EMIRATES	Das Island
KOREA (South)	Buk Pyung	UNITED KINGDOM	Lowestoft
MEXICO	Cayo Arcas	URUGUAY	Colonia
	Salina Cruz	VENEZUELA	Matanzas – San Felix
NETHERLANDS	Terneuzen		

ALGIERS

(El Djazair)

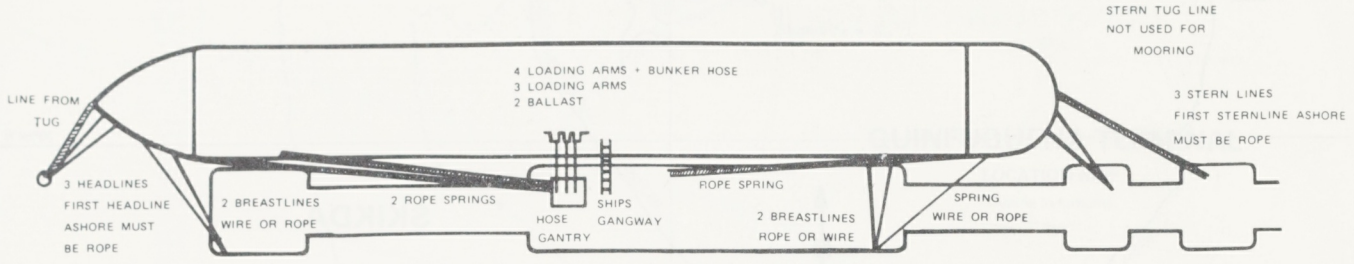



ARZEW
Fort de la Pointe
Mole No. 1
Mole No. 2
Mole No. 3
10 m.
P0
Mole No. 4
Harbour Office
Station
Slip
P1 13.5 m.
Jetee Sud
Jetee Large
Methane Port
P2
15.5 m.
North Berth 9.8 m.
South Berth 9.8 m.
Dns.
S1 10 m.
S2 11 m.
Jetee Secondaire
F.G.
N
100 0 500 m.
Methane
Liquifying Plant


ARZEW EL DJEDID
B1
23.5 m.
B2
23.5 m.
B3
26.5 m.
(Not Operational)
M1 13.5 m.
M2 13.5 m.
M3 13.5 m.
M4 13.5 m.
M5 13.5 m.
M6 13.5 m.
N
100 0 500
SCALE IN METRES

BOUGIE

MOORING ARRANGEMENT



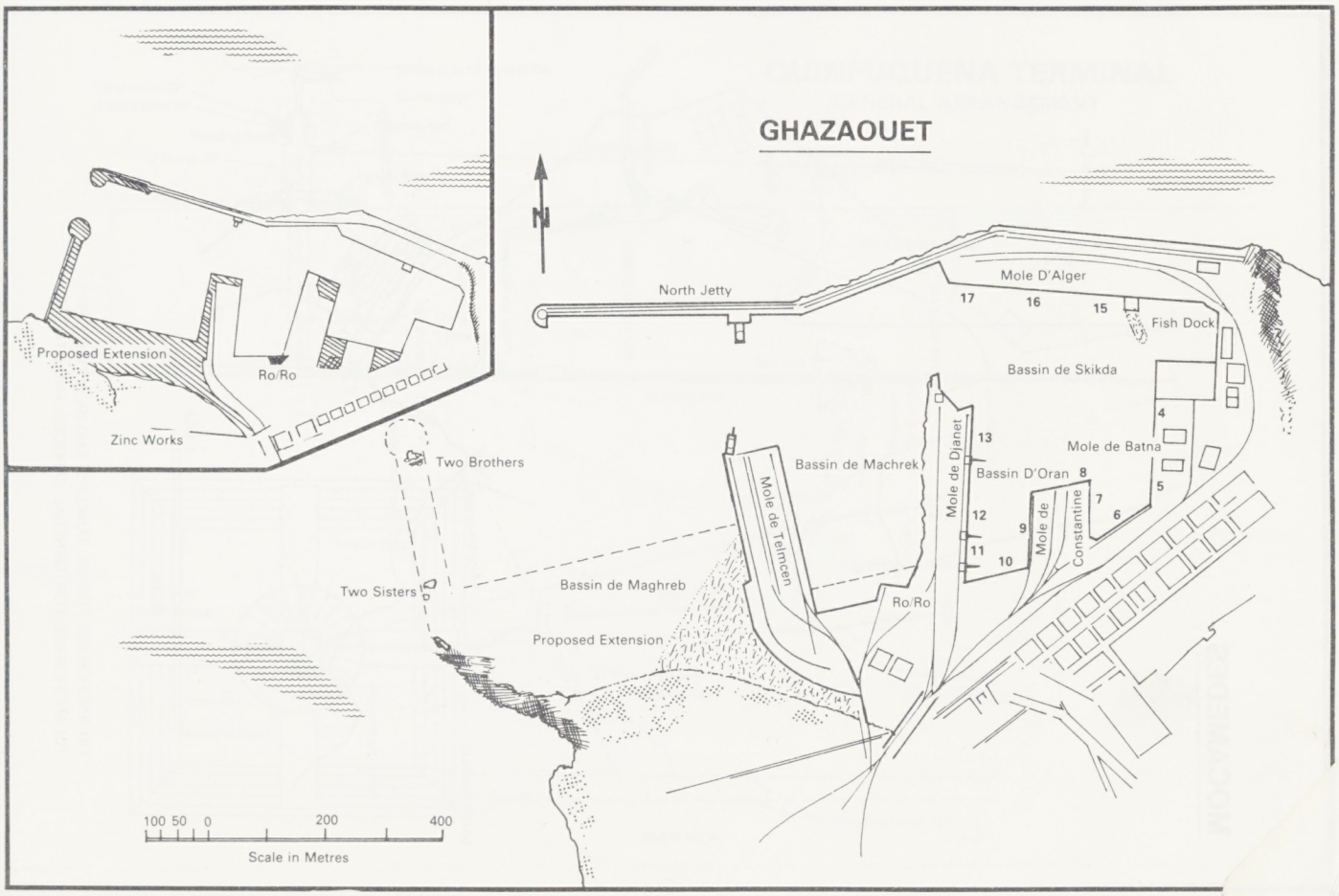
BERTHS DESIGNED FOR 30,000 D W T VESSELS

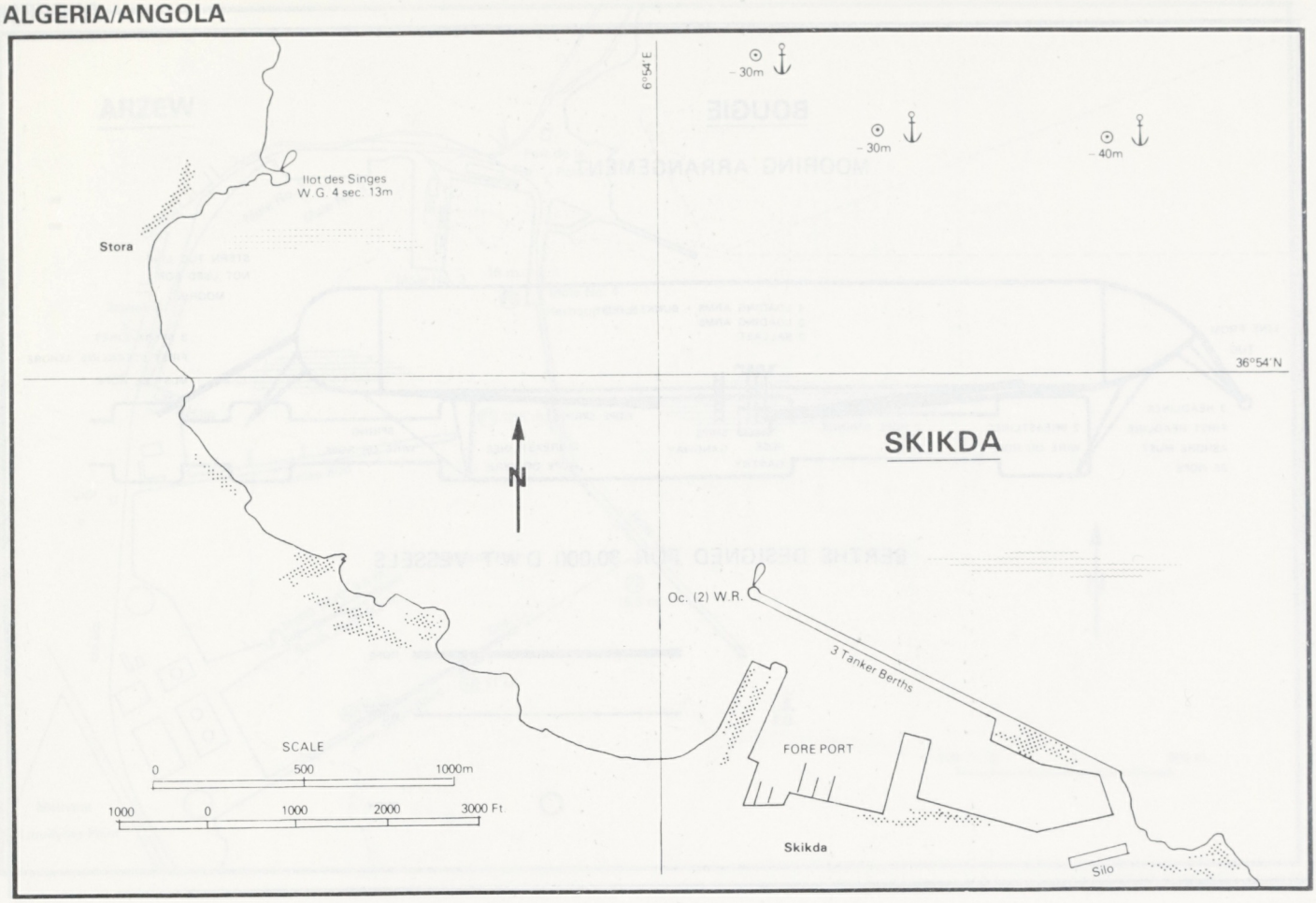
ROPE

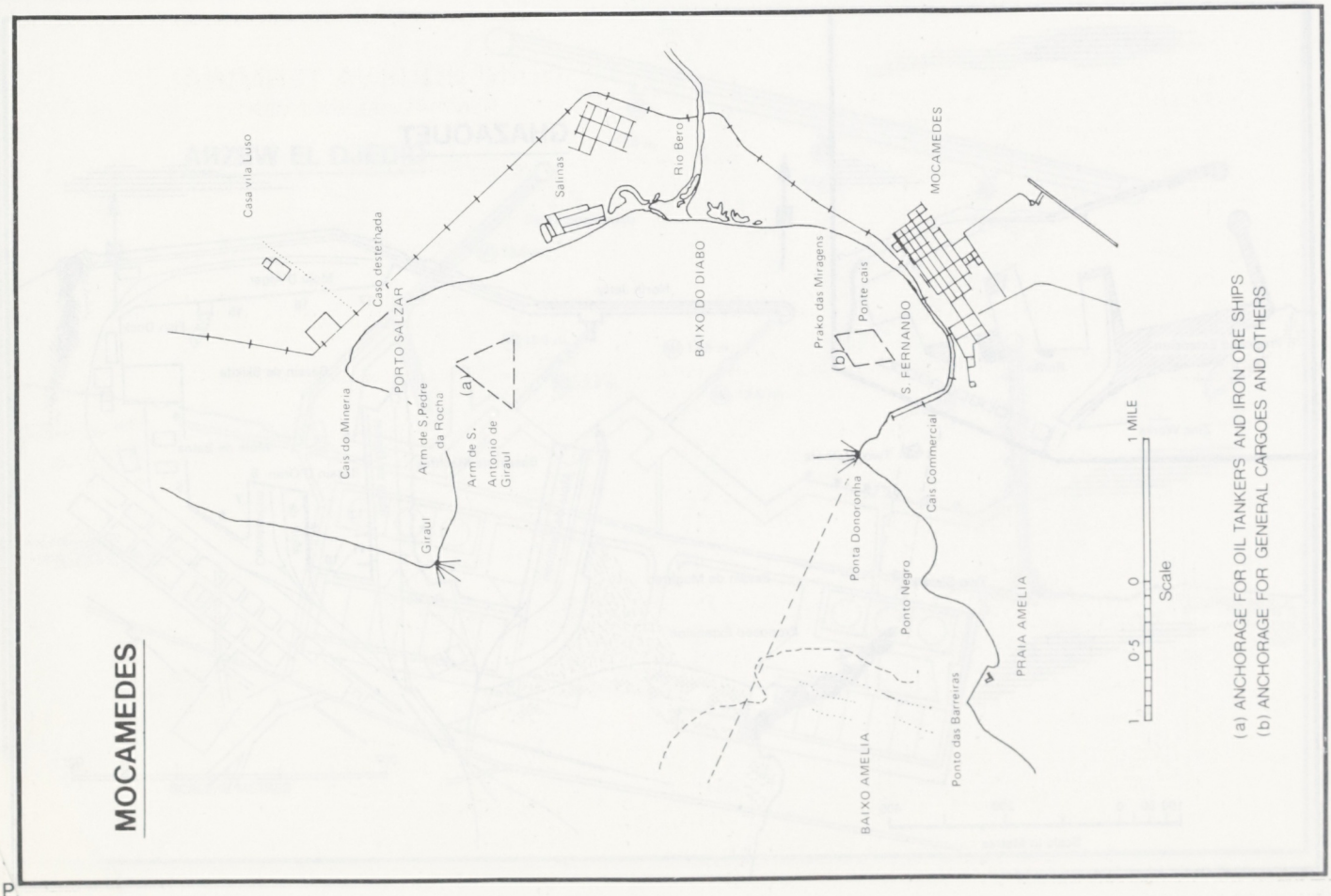
WIRE

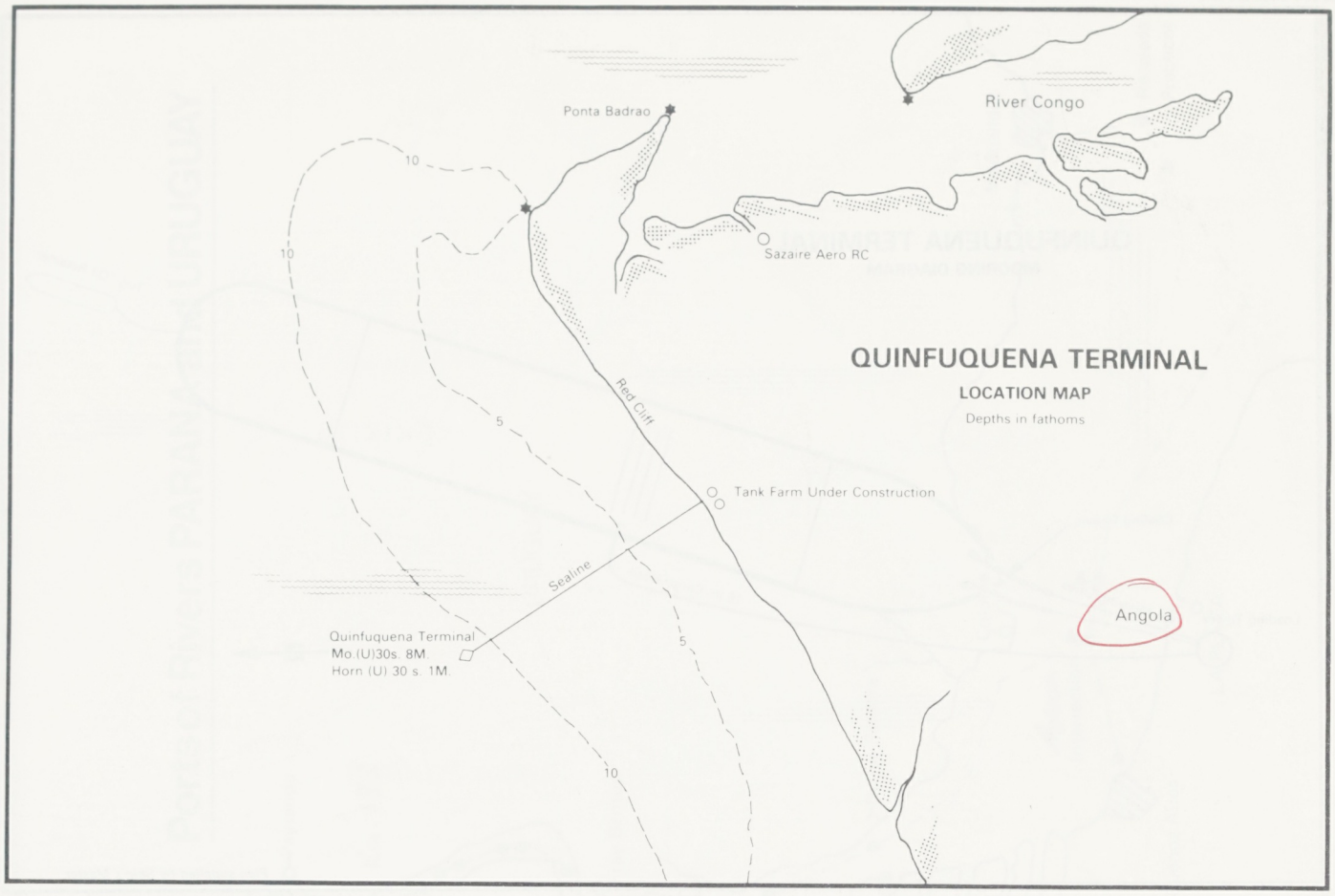
BUOY

GHAZAOUET




6°54'E
30m
30m
40m
Ilot des Singes
W.G. 4 sec. 13m
Stora
36°54'N
N
SKIKDA
Oc. (2) W.R.
3 Tanker Berths
FORE PORT
Skikda
Silo
SCALE
0
500
1000m
1000
0
1000
2000
3000 Ft

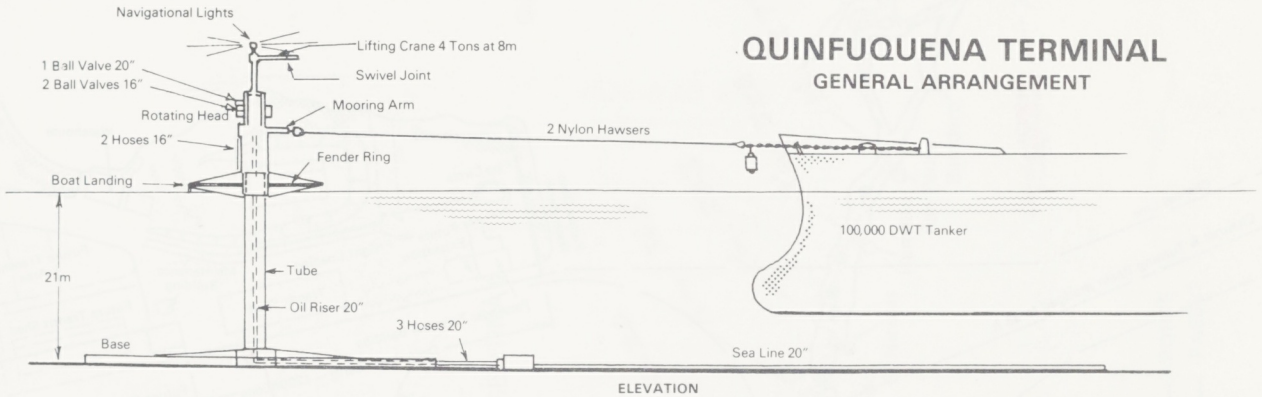

MOCAMEDES
Casa vila Luso
Caso destelhada
PORTO SALZAR
Salinas
Rio Bero
BAIXO DO DIABO
Praia das Miragens
Ponte cais
(b)
MOCAMEDES
S. FERNANDO
Cais Commercial
Cais do Mineria
Arm de S.Pedre da Rocha
Arm de S. Antonio de Giraul
(a)
Giraul
Ponta Dononha
Ponto Negro
Ponto das Barreiras
PRAIA AMELIA
BAIXO AMELIA
1 MILE
0
0.5
1
Scale
(a) ANCHORAGE FOR OIL TANKERS AND IRON ORE SHIPS
(b) ANCHORAGE FOR GENERAL CARGOES AND OTHERS



QUINFUQUENA TERMINAL

LOCATION MAP

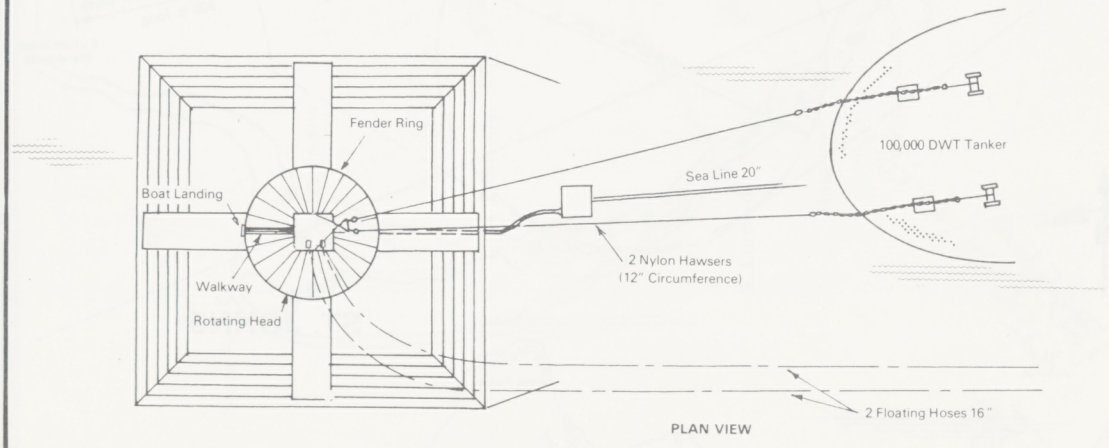
Depths in fathoms



QUINFUQUENA TERMINAL

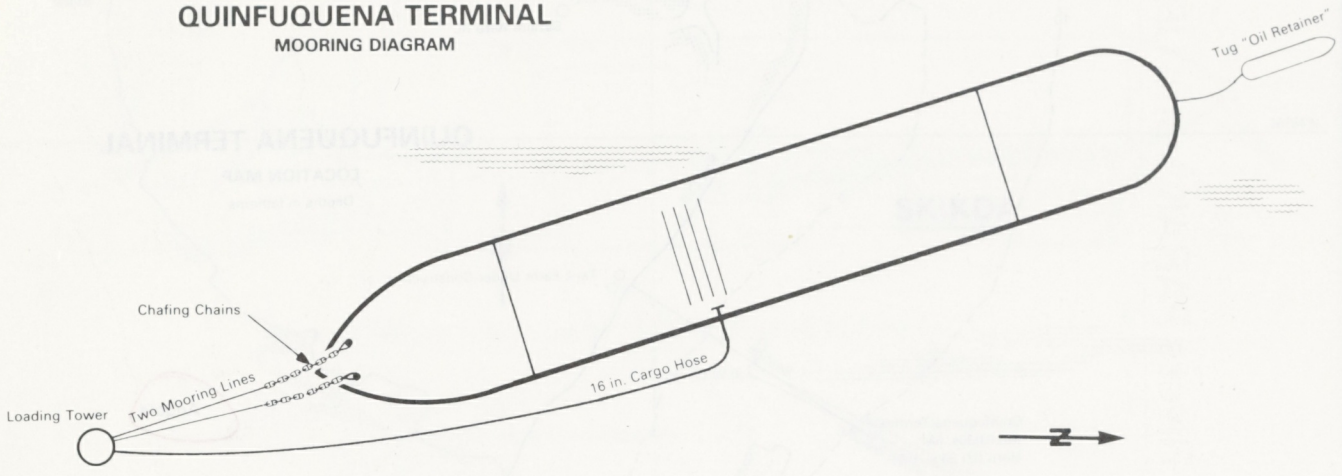
GENERAL ARRANGEMENT

ELEVATION

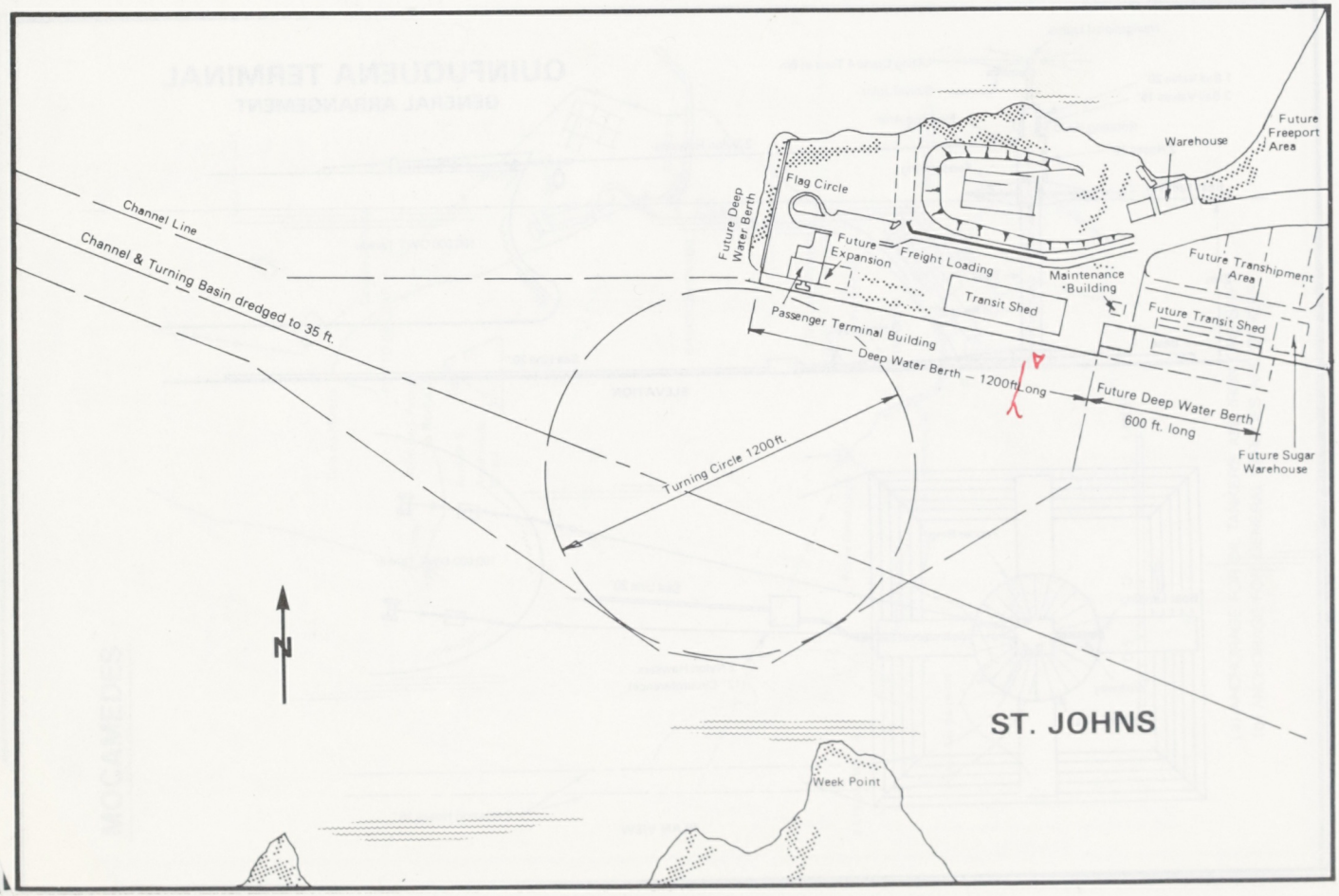


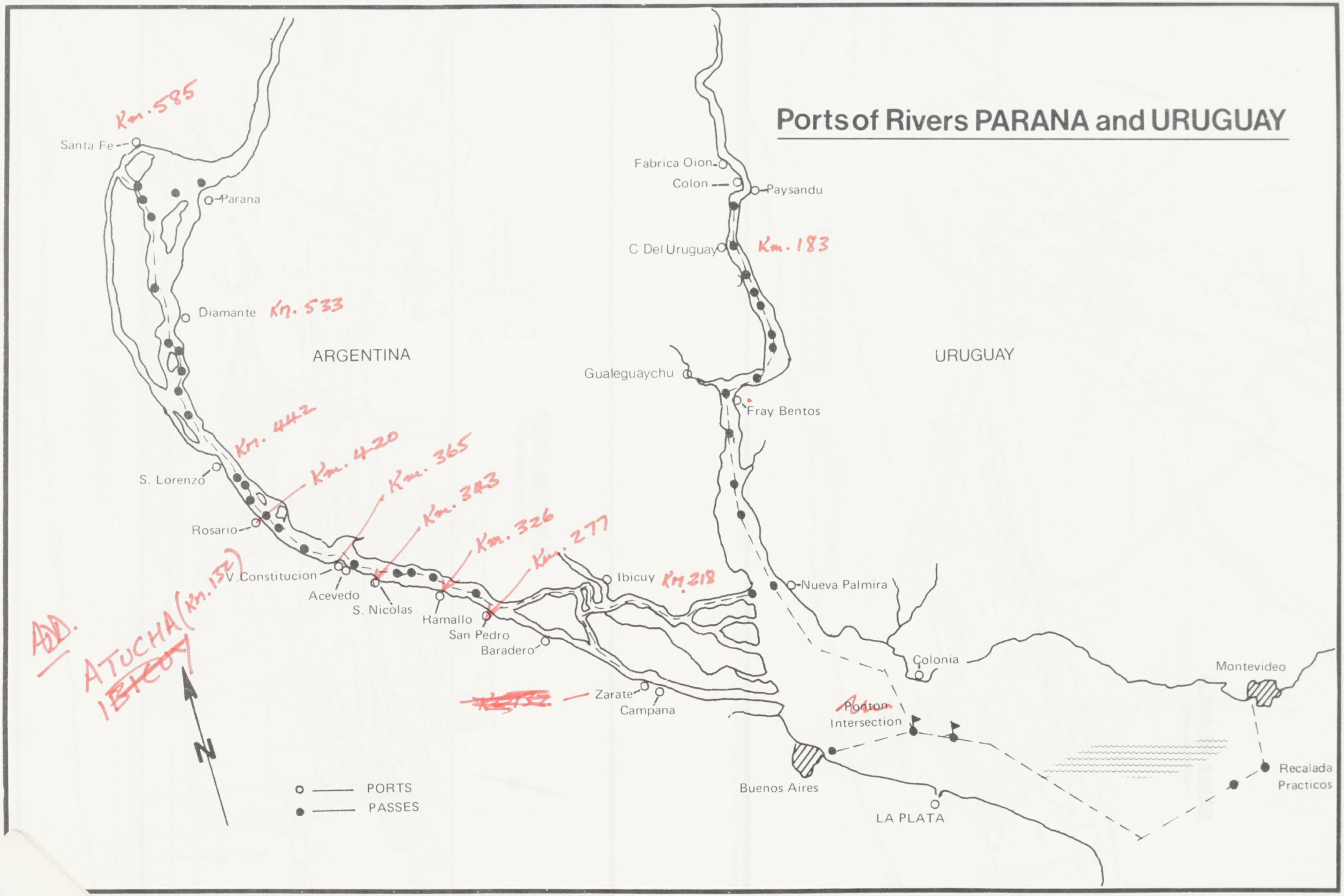
PLAN VIEW

QUINFUQUENA TERMINAL
MOORING DIAGRAM



Plan supplied by Ship's Master





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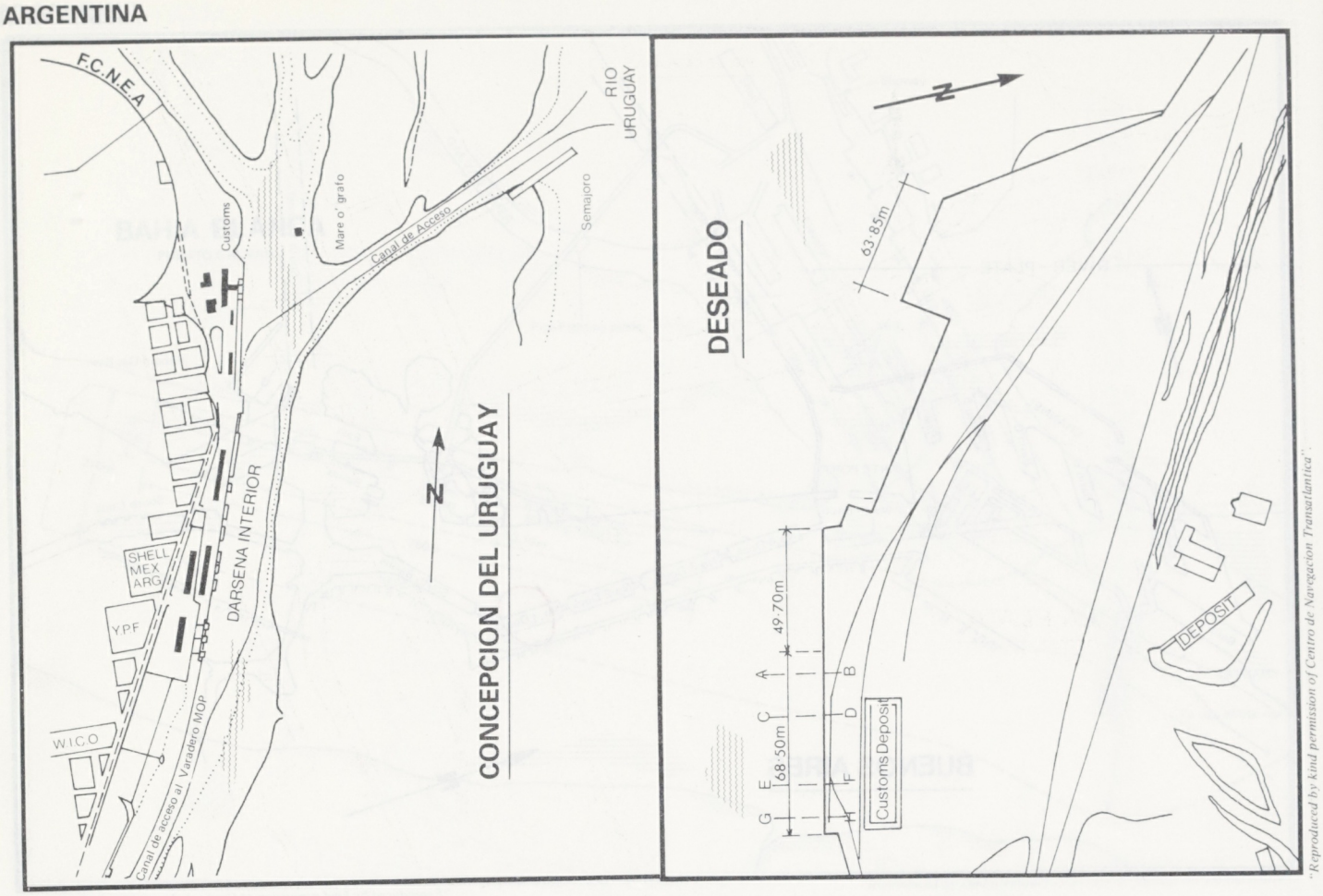
ARGENTINA



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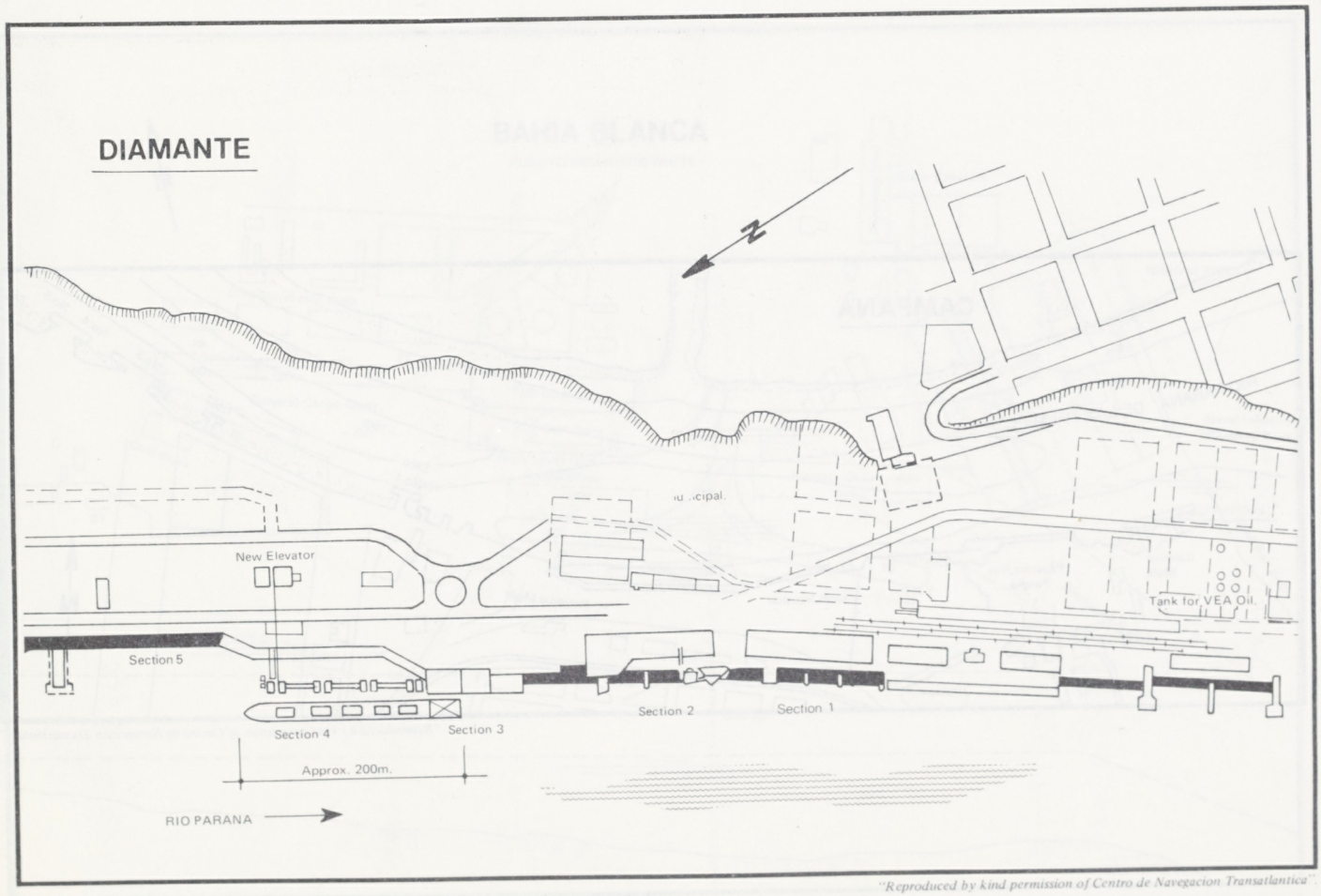

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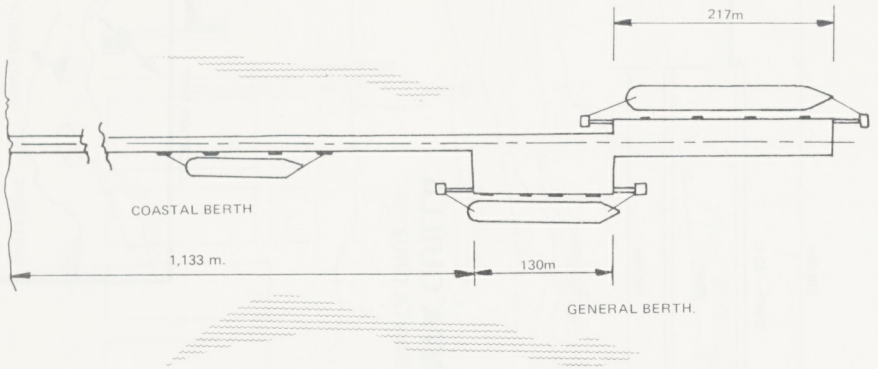
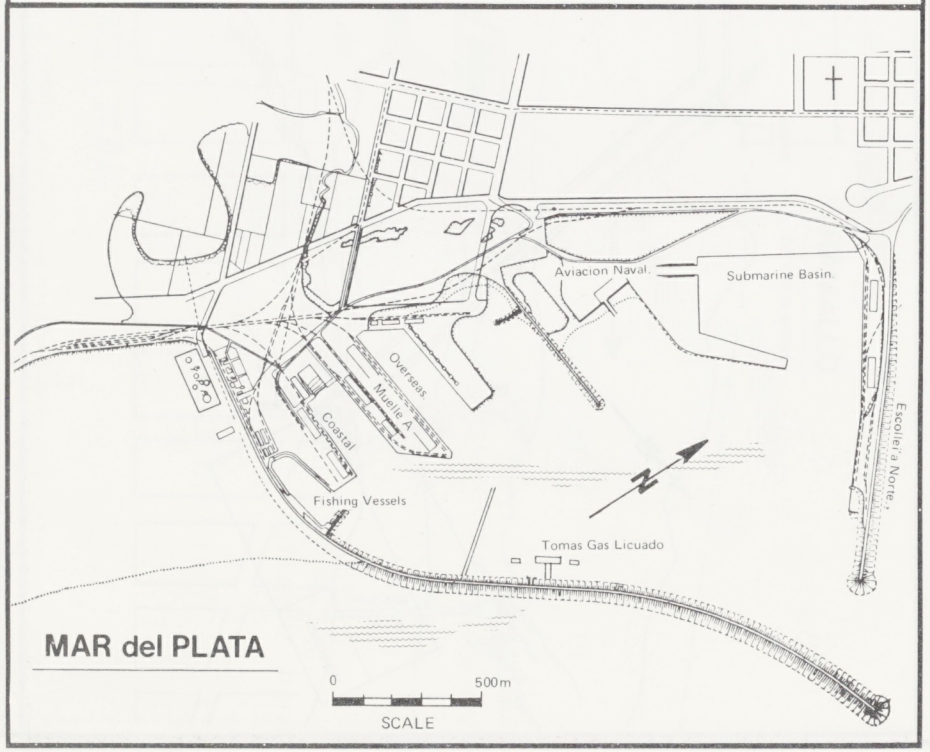
MADRYN (New Mole)

2,500 m. North of existing mole





MAR del PLATA

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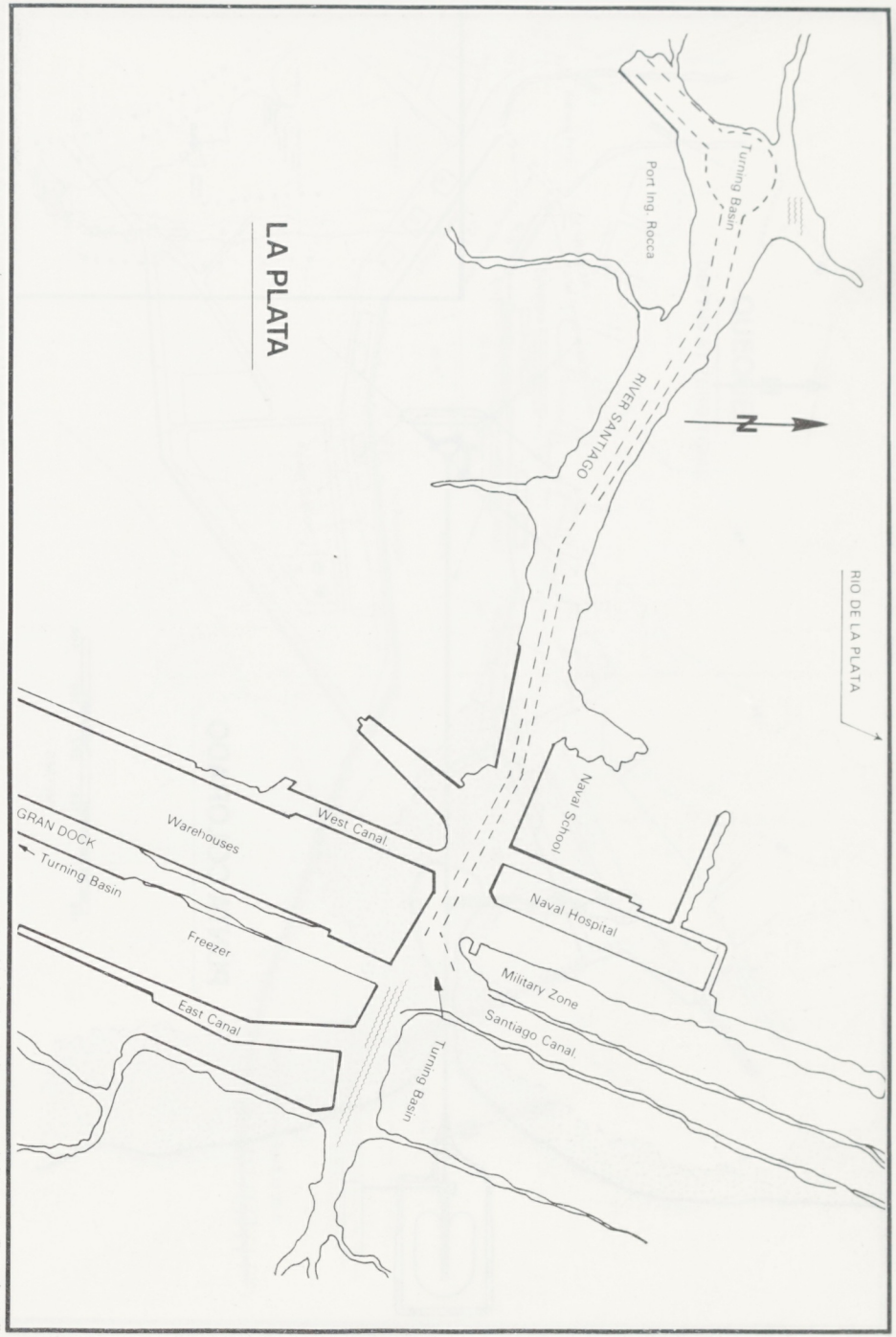
LA PLATA



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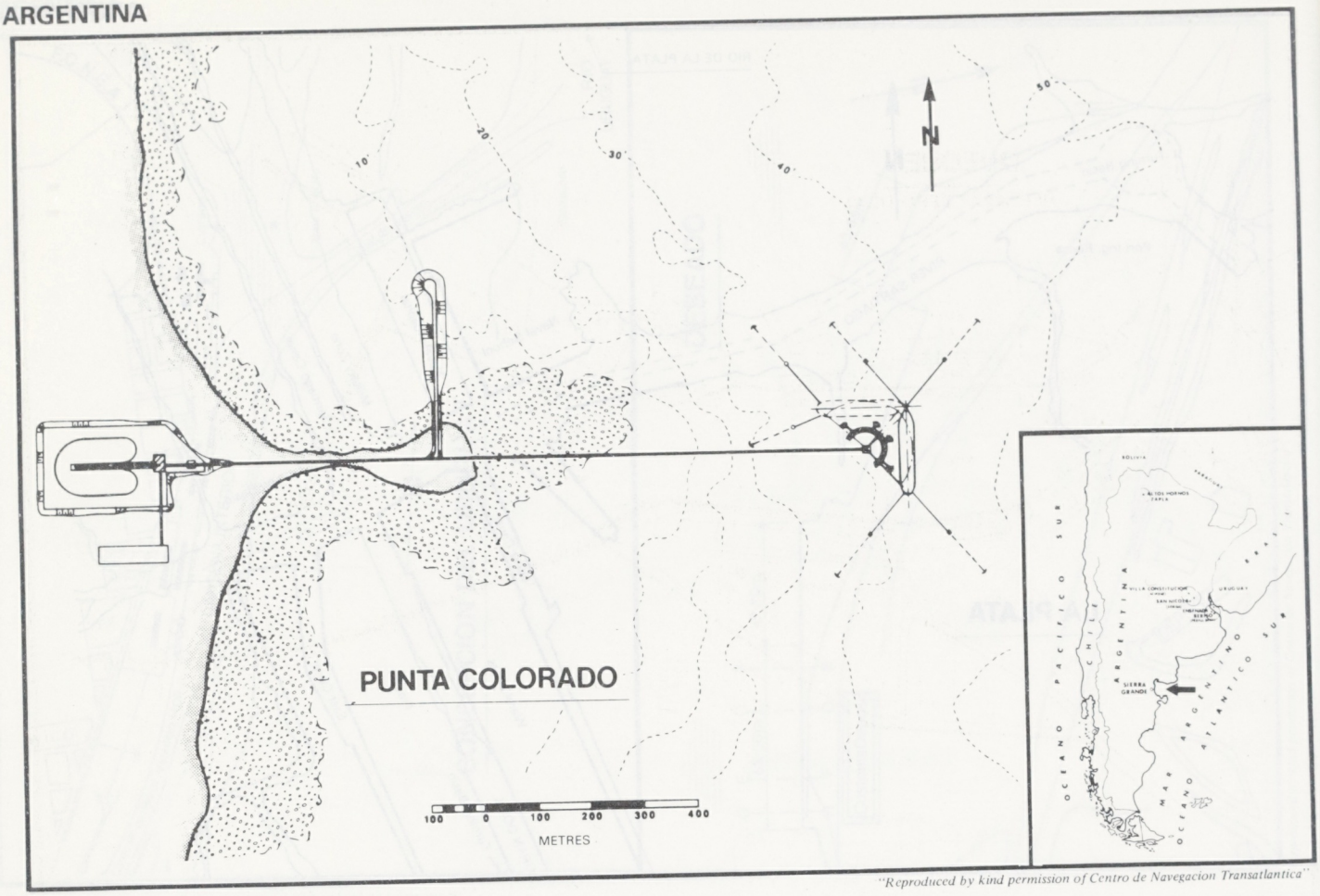
ARGENTINA



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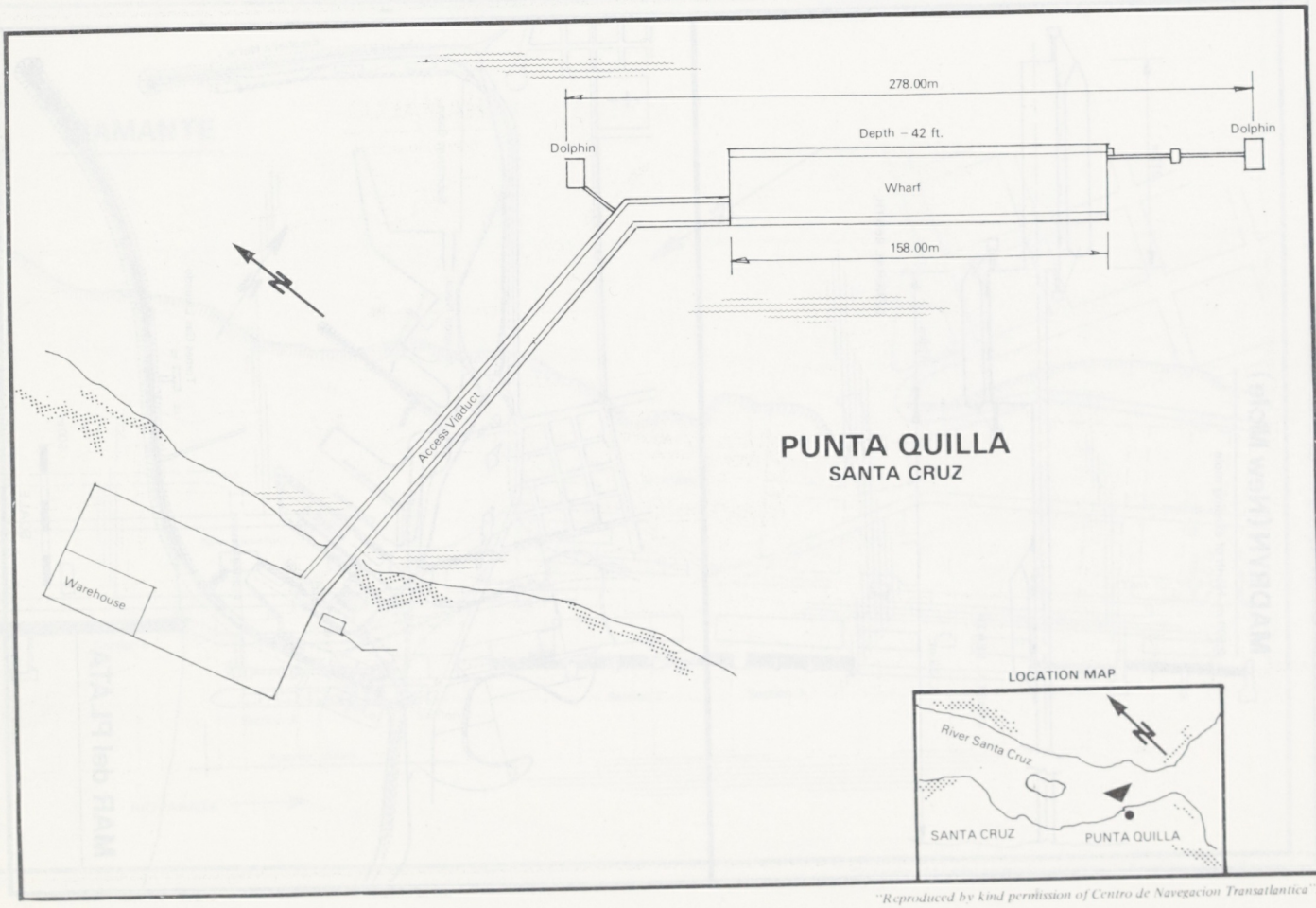

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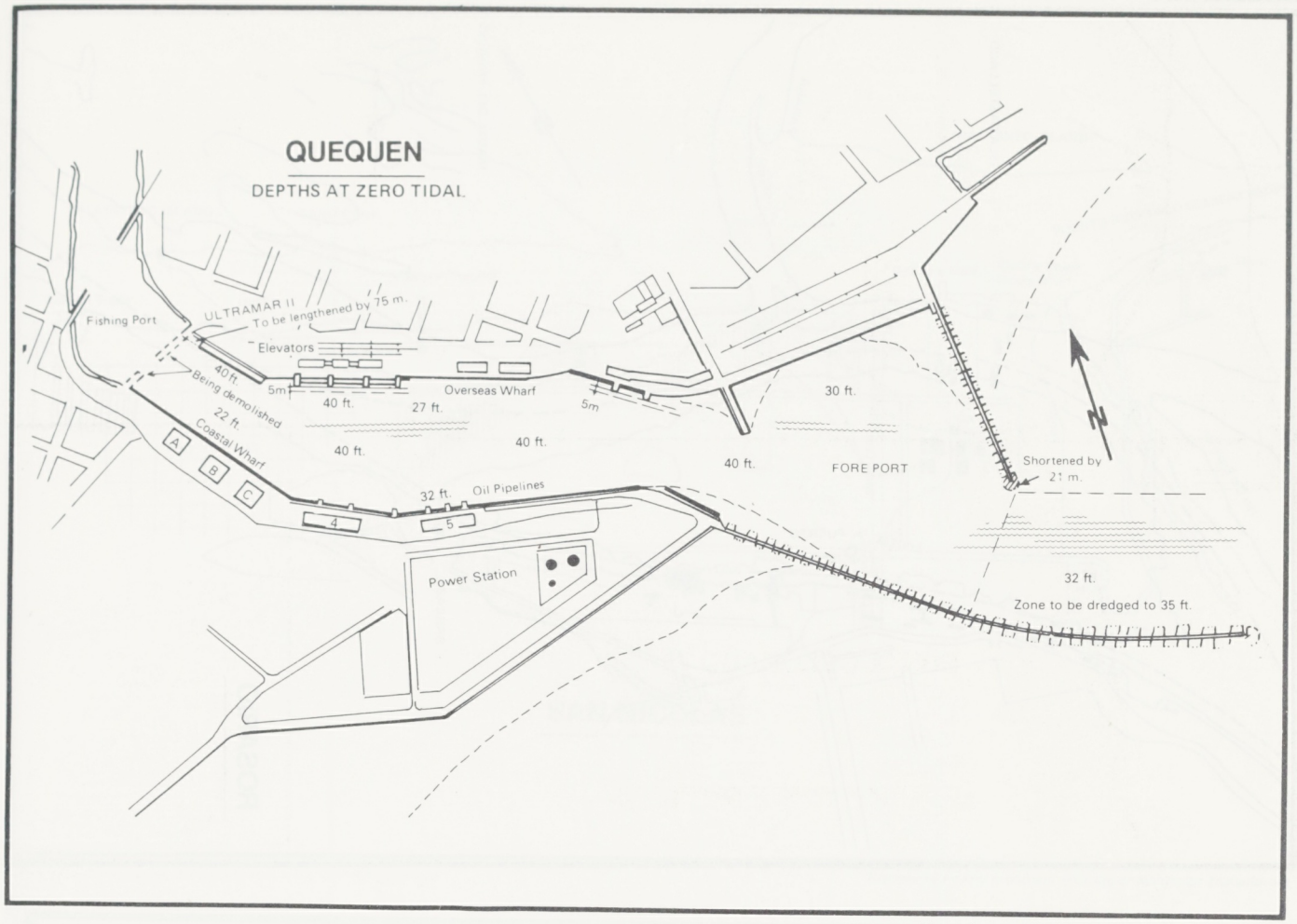

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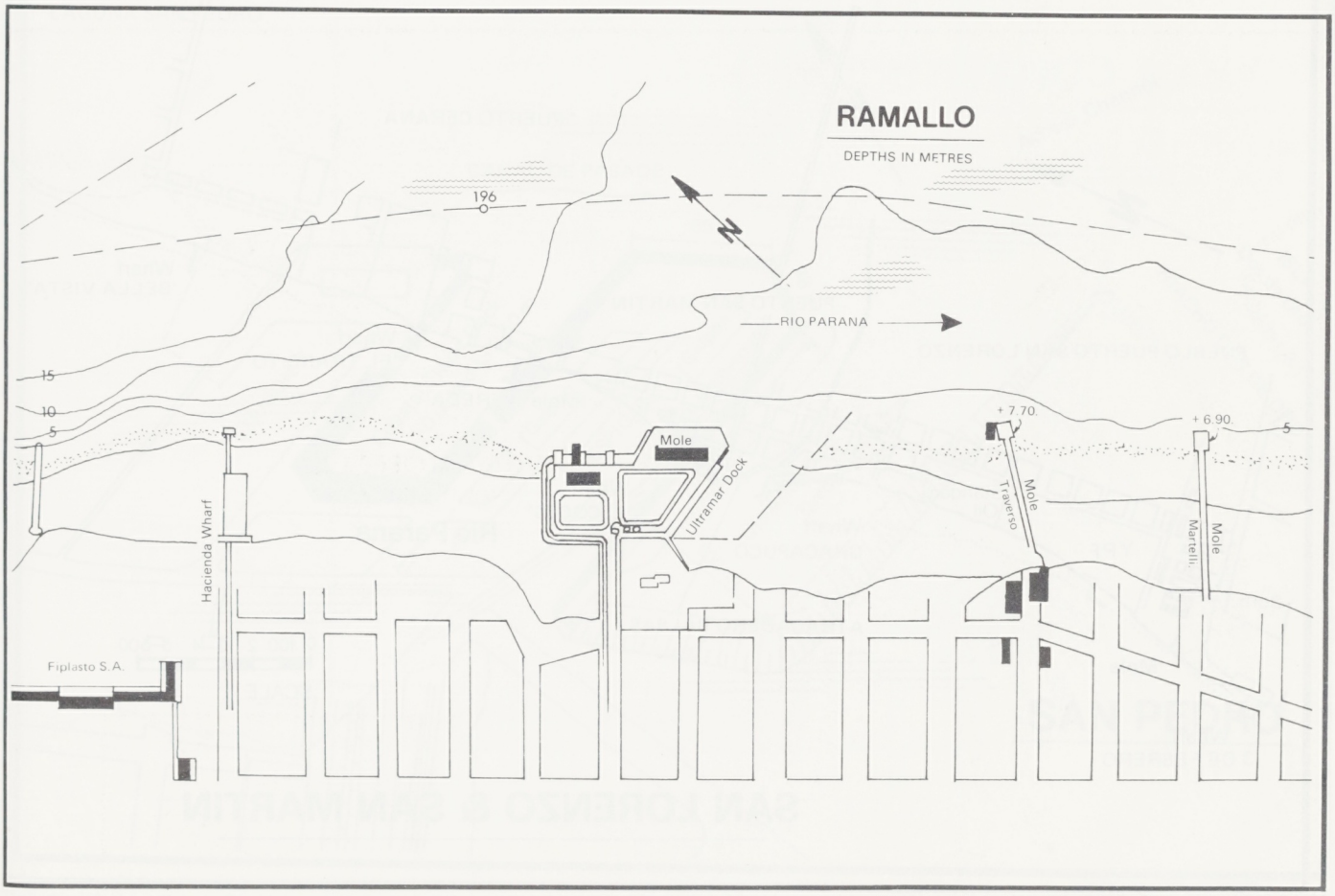

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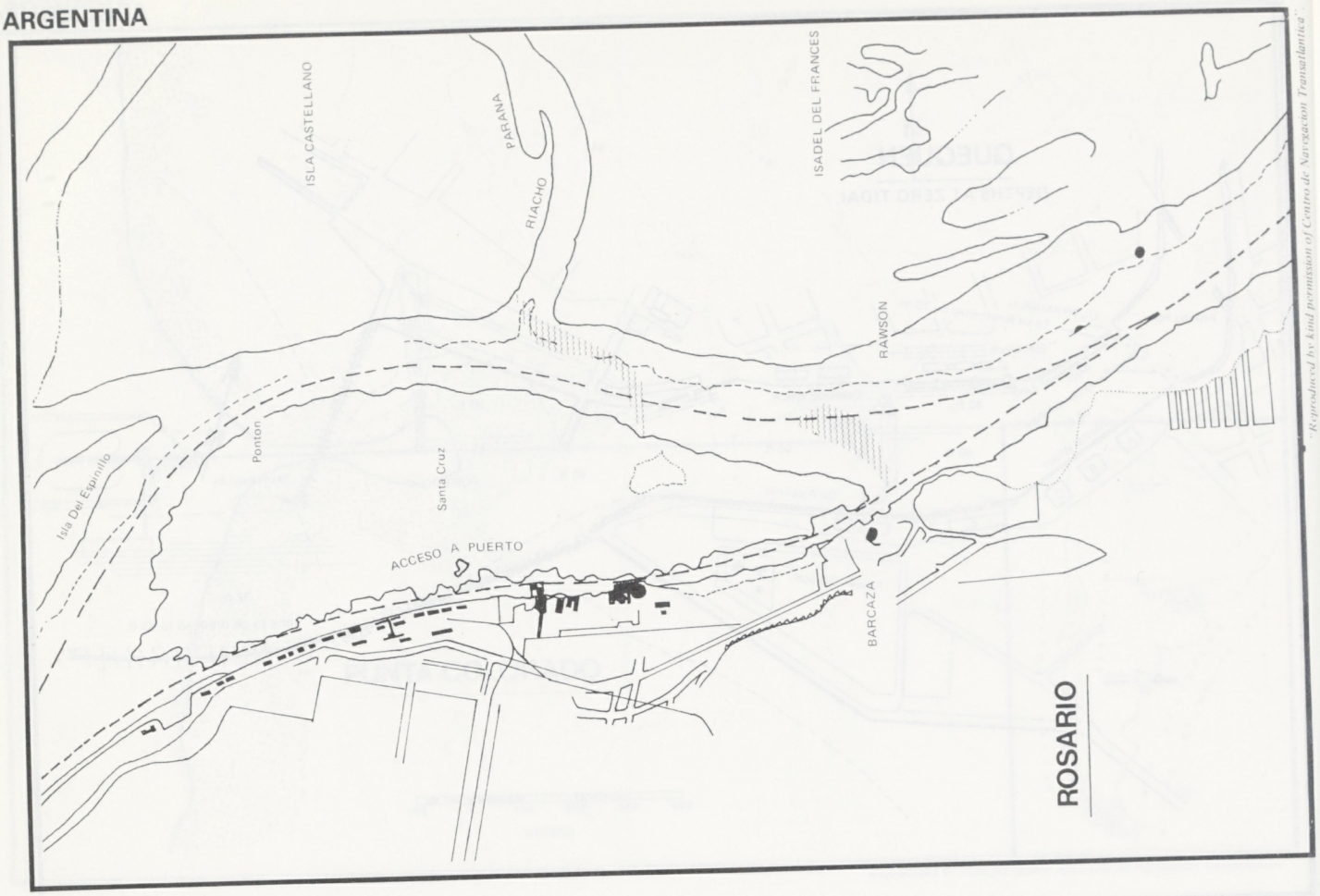

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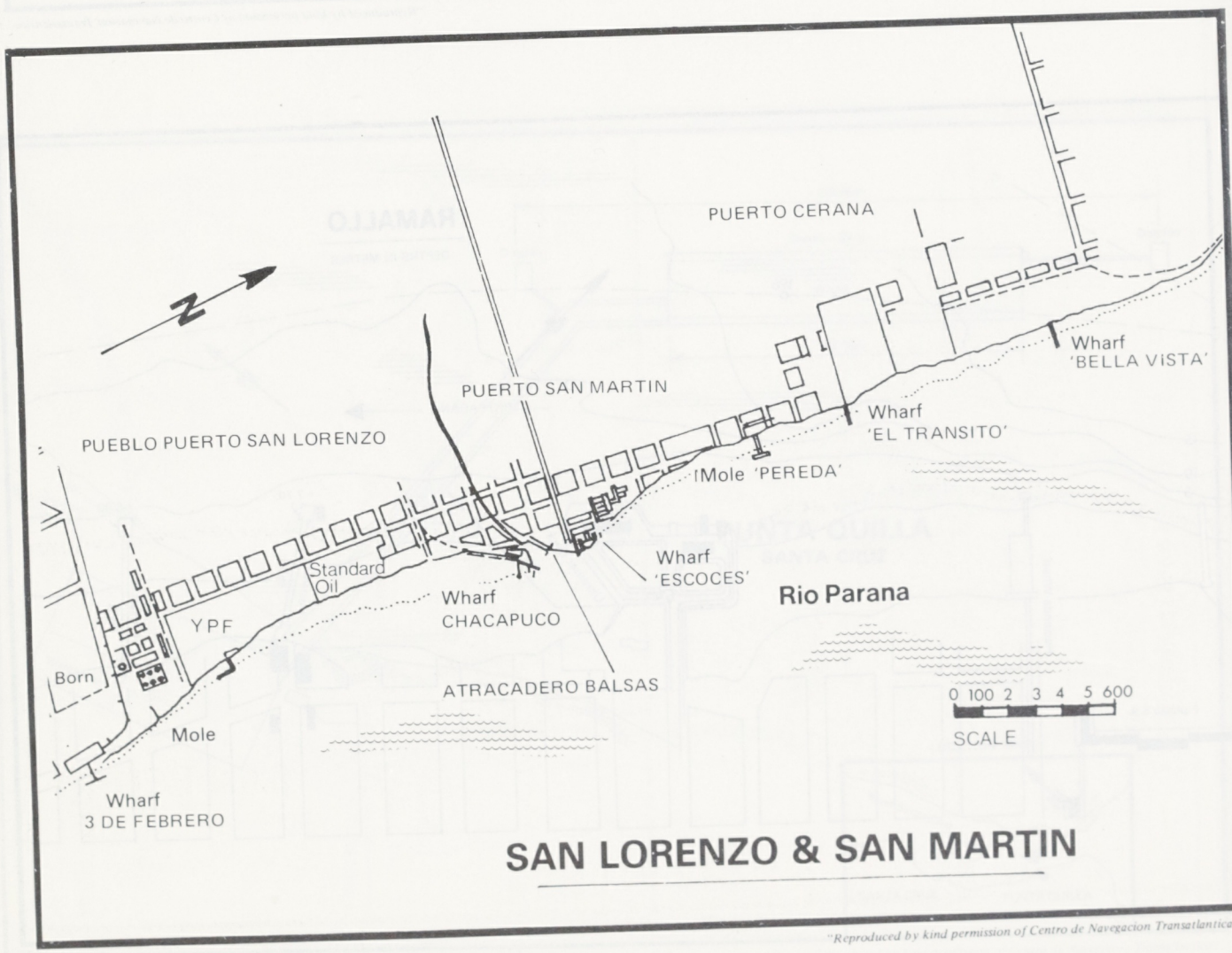

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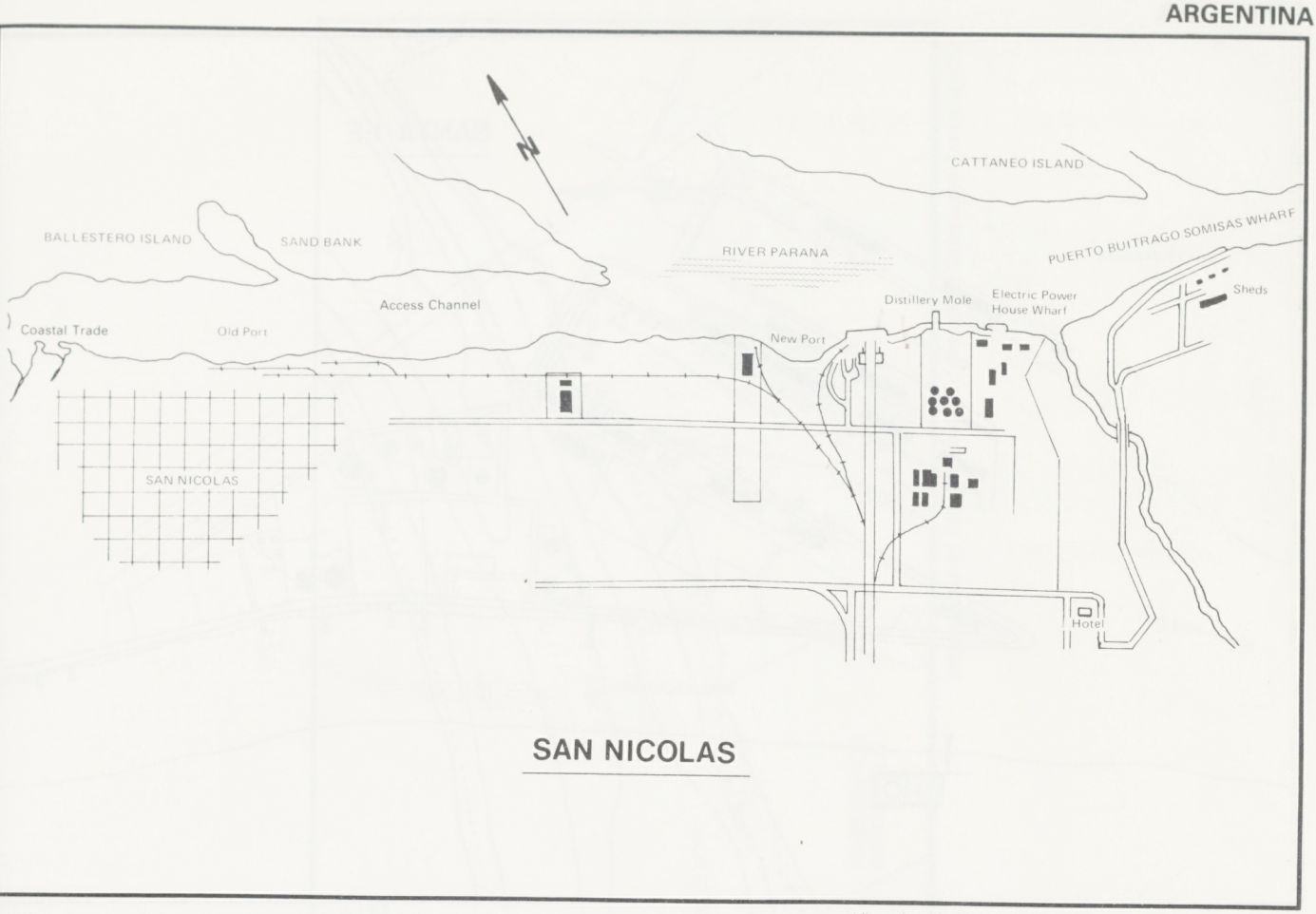

SAN NICOLAS

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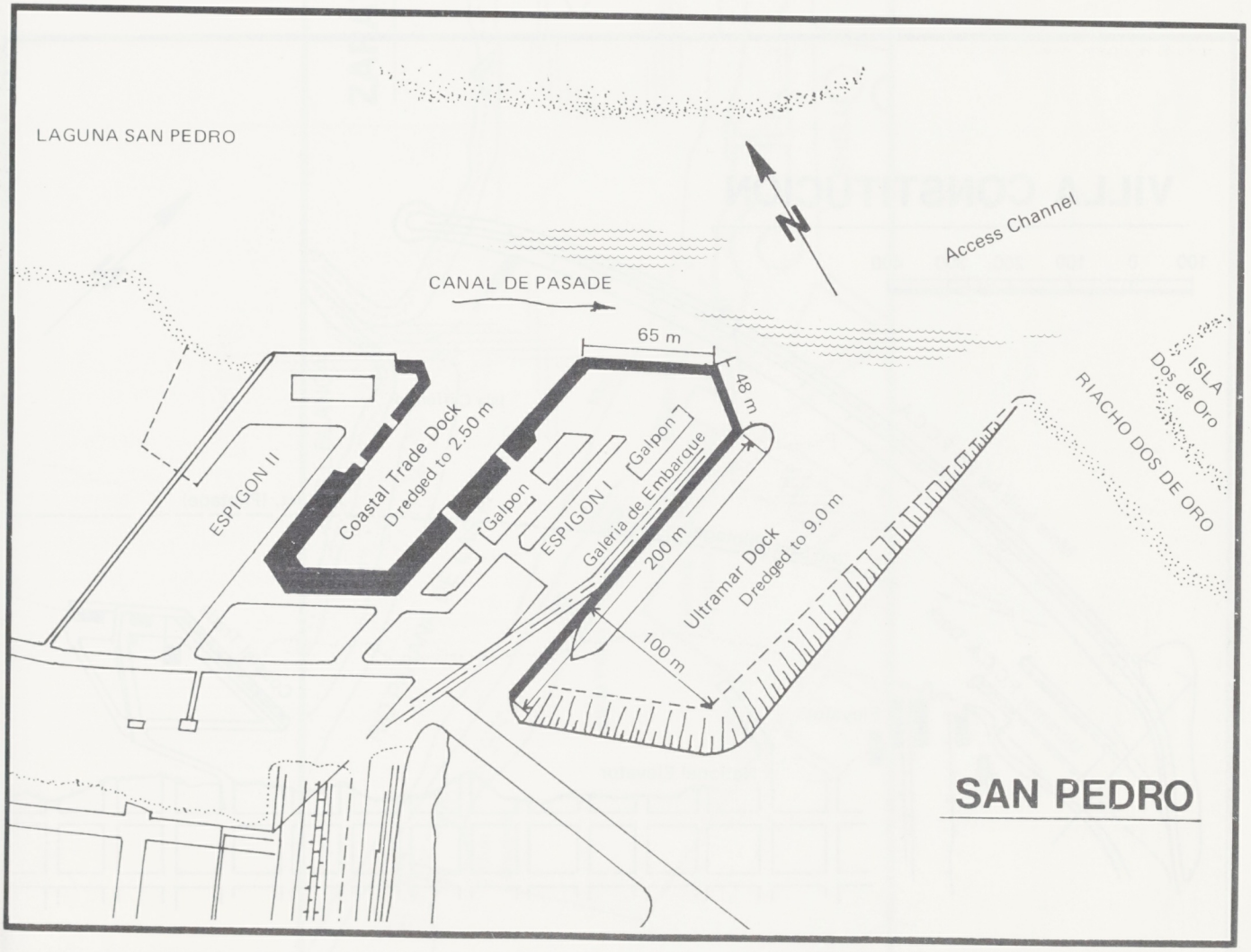

SAN PEDRO

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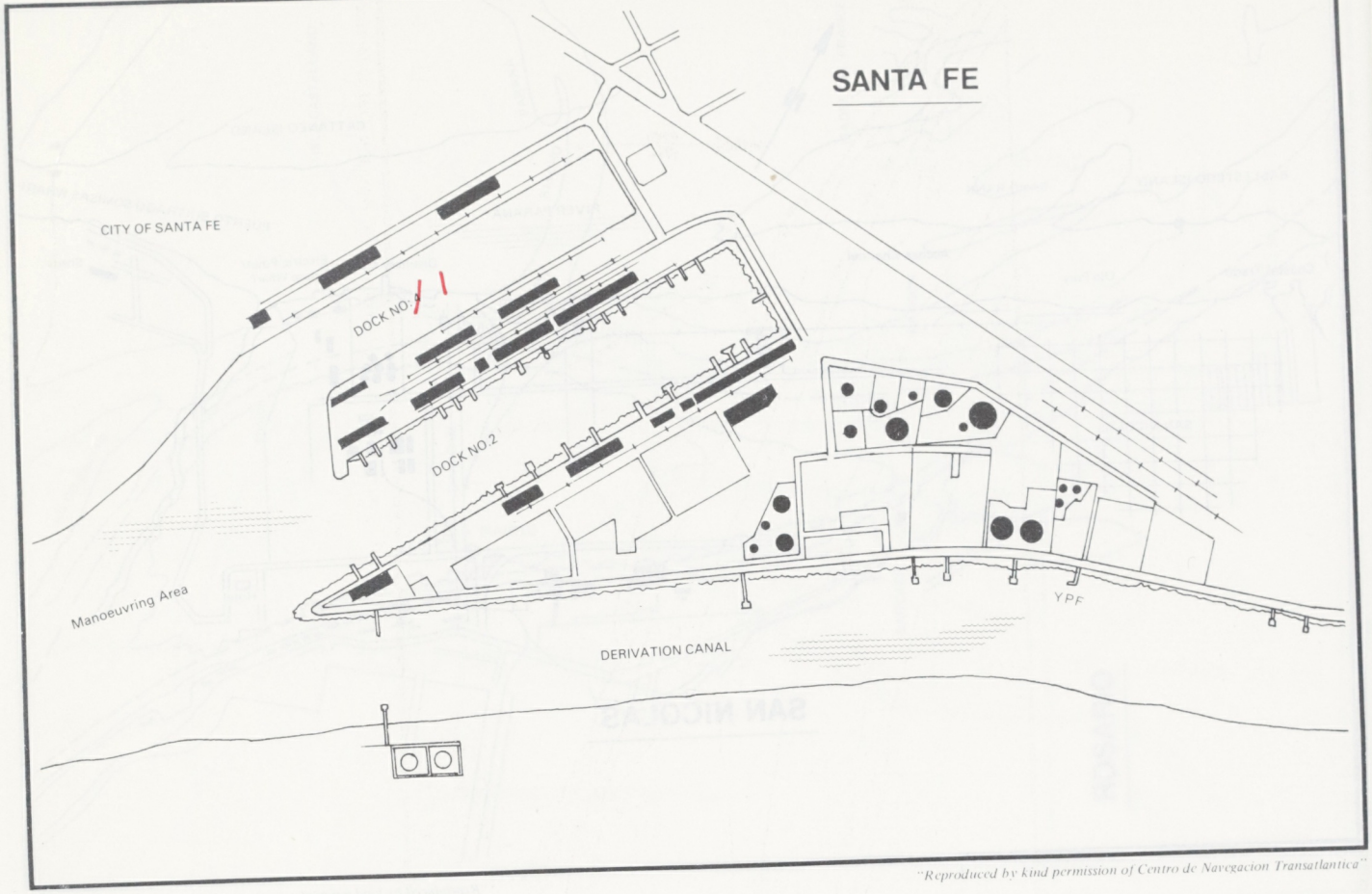
SANTA FE



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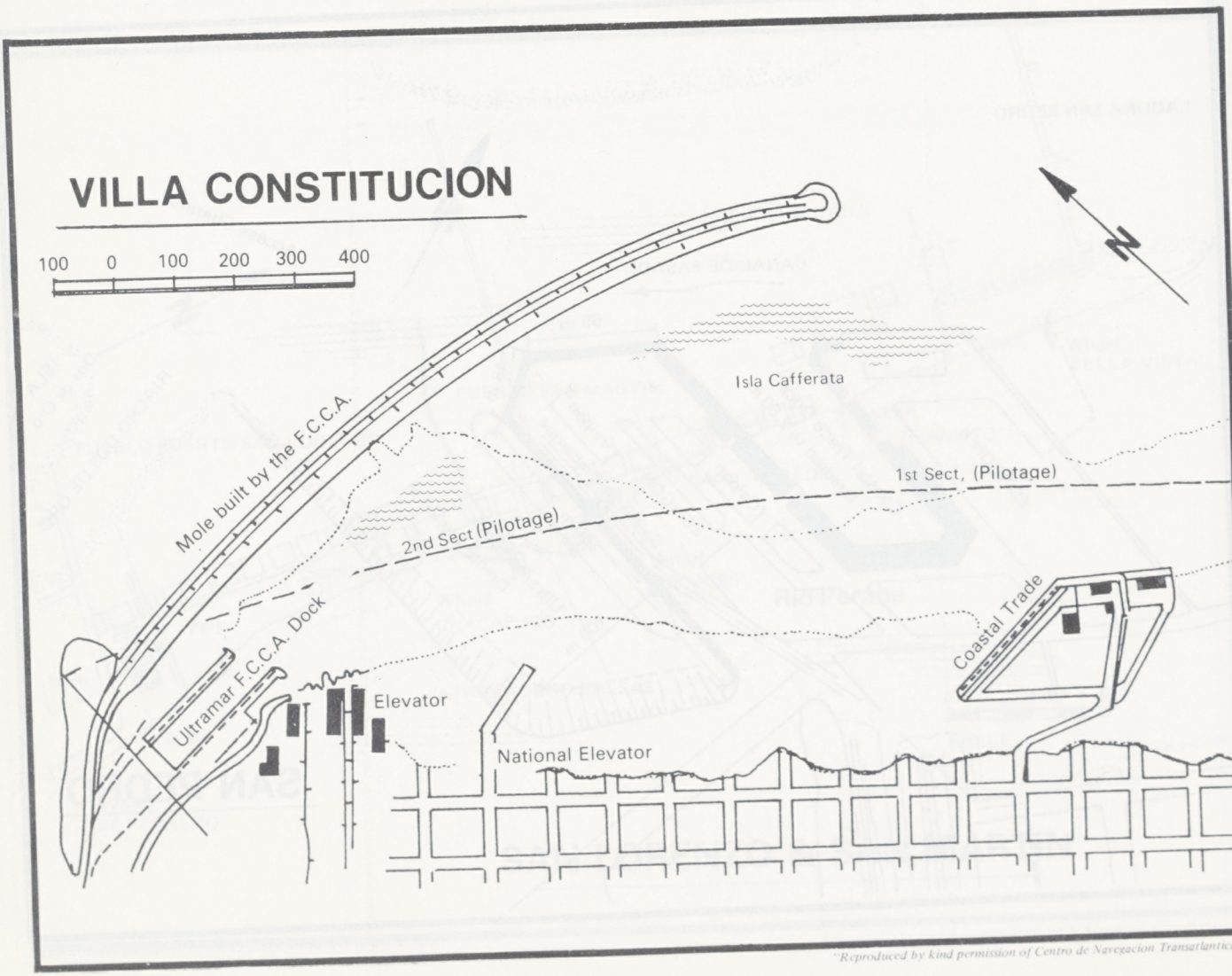
VILLA CONSTITUCION



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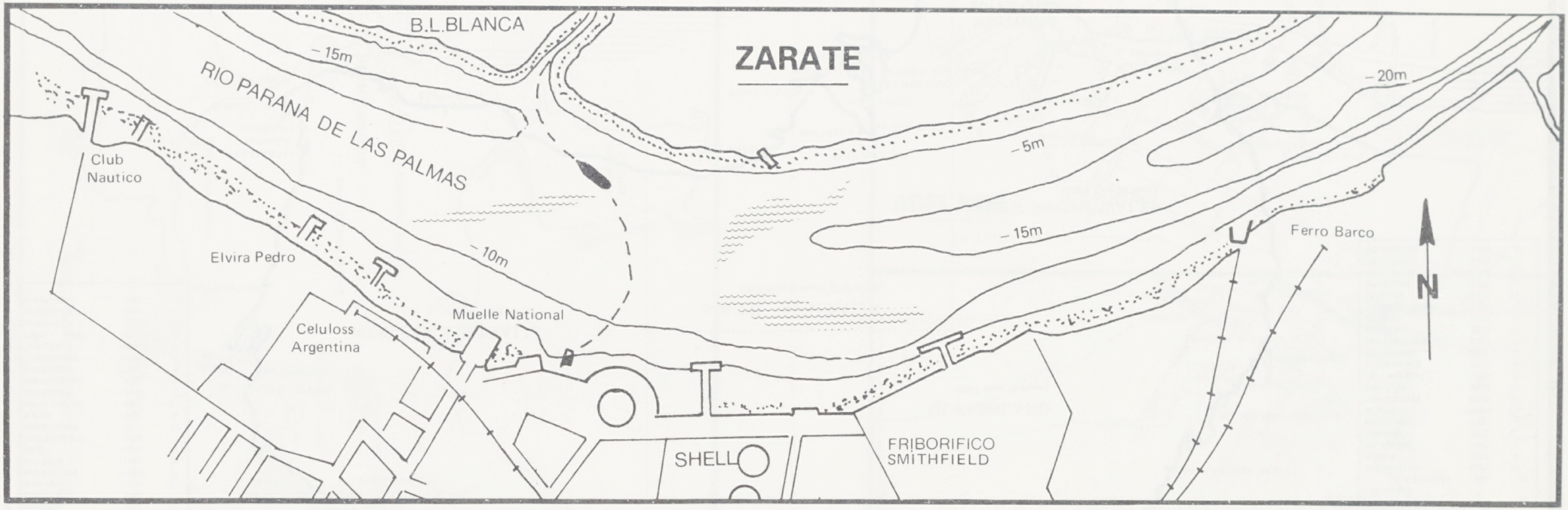

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NOT STRAIGHT.

FREMANTLE (VIA CAPE) AT 16 KNOTS TO	DISTANCE IN MILES	DURATION IN DAYS
ALEXANDRIA	11654	30½
AUGUSTA - SICILY	10891	28½
BALBOA	9357	24½
BANGKOK	3000	8
BOMBAY	3982	10½
CALCUTTA	3684	9½
CALLAO	8500	22
CAPE GOOD HOPE	4672	12
COLOMBO	3121	8
CRISTOBAL	11111	29
DAIREN	4400	11½
DAKAR	8300	21½
DJAKARTA	1761	4½
DURBAN	4241	11½
GIBRALTAR	9856	26
HONG KONG	3442	9
HONOLULU	6503	17
LAS PALMAS	9156	24
LOS ANGELES	8565	22½
MANILA	2925	7½
MOMBASA	4564	12
MONTEVIDEO	8266	21½
MONTREAL	11824	31
NEW ORLEANS	11980	31
NEW YORK	11482	30
OSLO	11361	29½
PORT MORESBY	2878	7½
QUOIN ISLAND	4877	13
RIJEKA	11464	30
RIO DE JANEIRO	7943	21
ROTTERDAM	10862	28½
SAN FRANCISCO	8501	22
SINGAPORE	2220	6
SKARAMANGA	11346	29½
TRINIDAD	10000	26
TRIPOLI - LIBYA	10931	28½
VALPARAISO	7827	20½
VANCOUVER	8424	22
YOKOHAMA	4460	11½

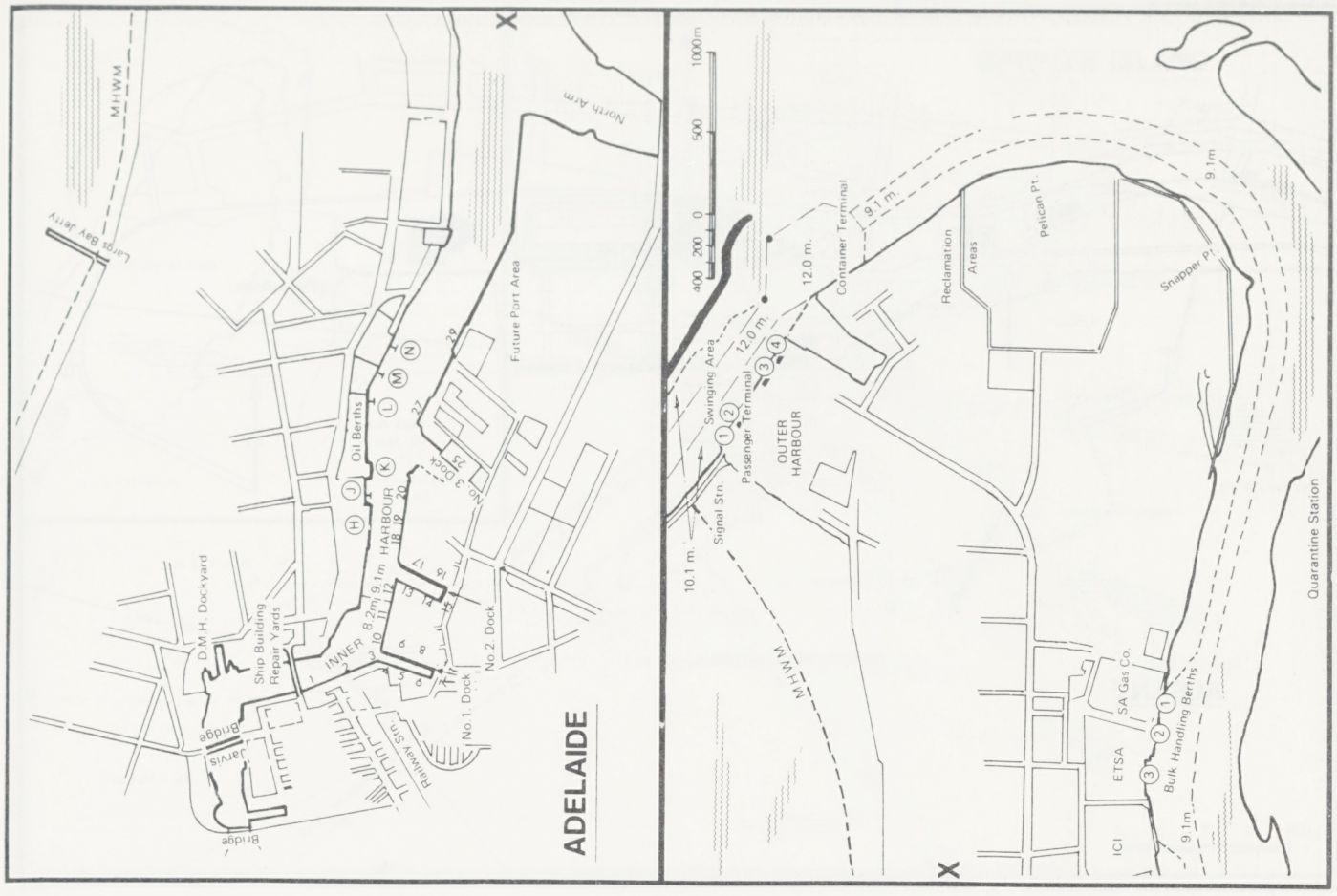
FREMANTLE AT 16 KNOTS TO	DISTANCE IN MILES	DURATION IN DAYS
ADELAIDE	1343	3½
ALBANY	349	1
AUCKLAND	3202	8
BRISBANE	2638	7
CAIRNS	3050	8
HOBART	1806	5
MELBOURNE	1681	4½
PORT DARWIN	1838	5
SYDNEY	2140	5½
WELLINGTON	3022	8
DUNEDIN	2750	7
MACKAY	3066	8
WYNDHAM	1764	4½
PORT PIRIE	1400	3½

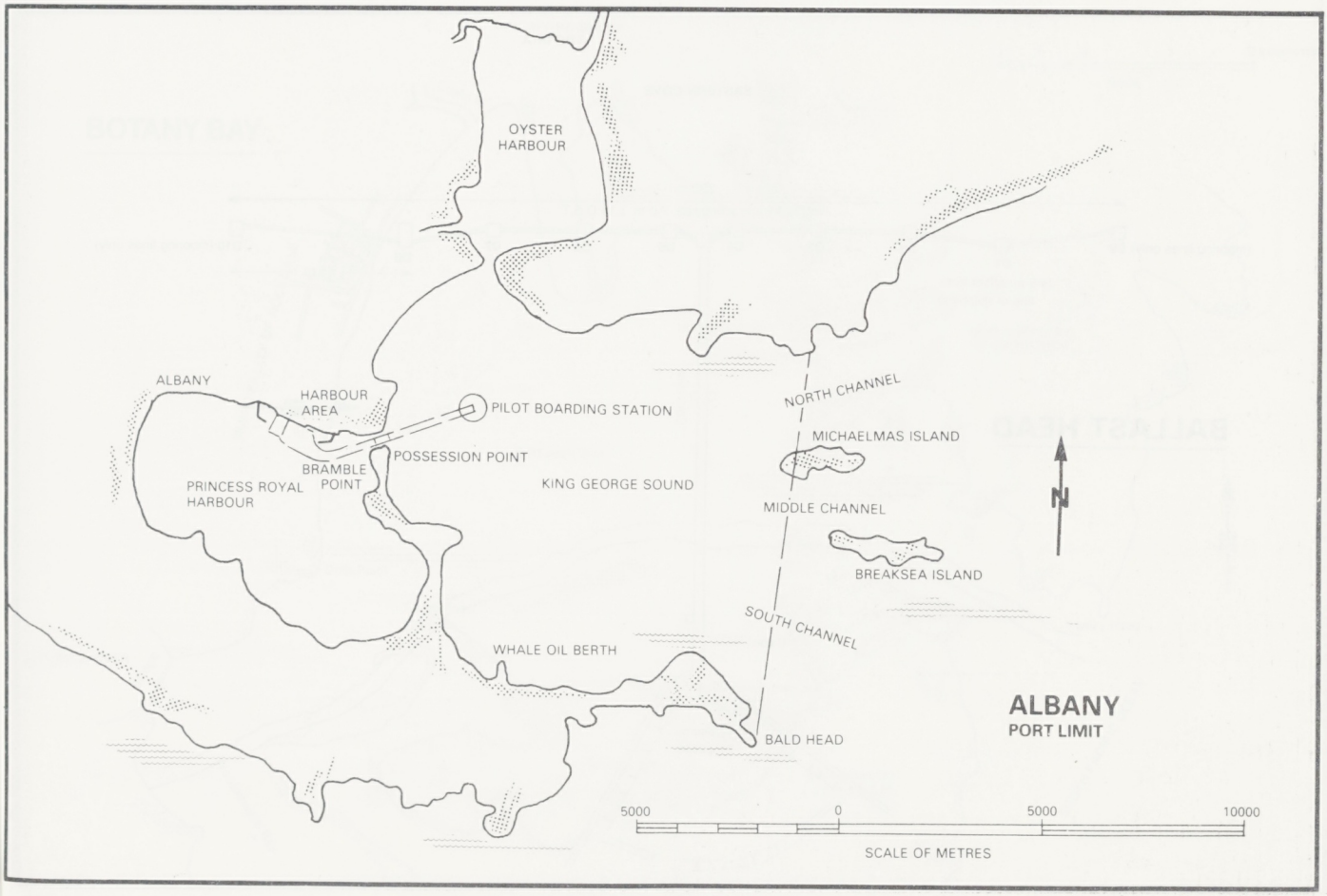
BRISBANE AT 16 KNOTS TO	DISTANCE IN MILES	DURATION IN DAYS
ADELAIDE	1471	4
ALBANY	2316	6
AUCKLAND	1358	3½
CAIRNS	829	2
DUNEDIN	1606	4
FREMANTLE	2638	7
HOBART	1132	3
MACKAY	511	1½
MELBOURNE	1080	3
PORT DARWIN	2181	5½
PORT PIRIE	1639	4
SYDNEY	515	1½
WELLINGTON	1447	4
WYNDHAM	2311	6

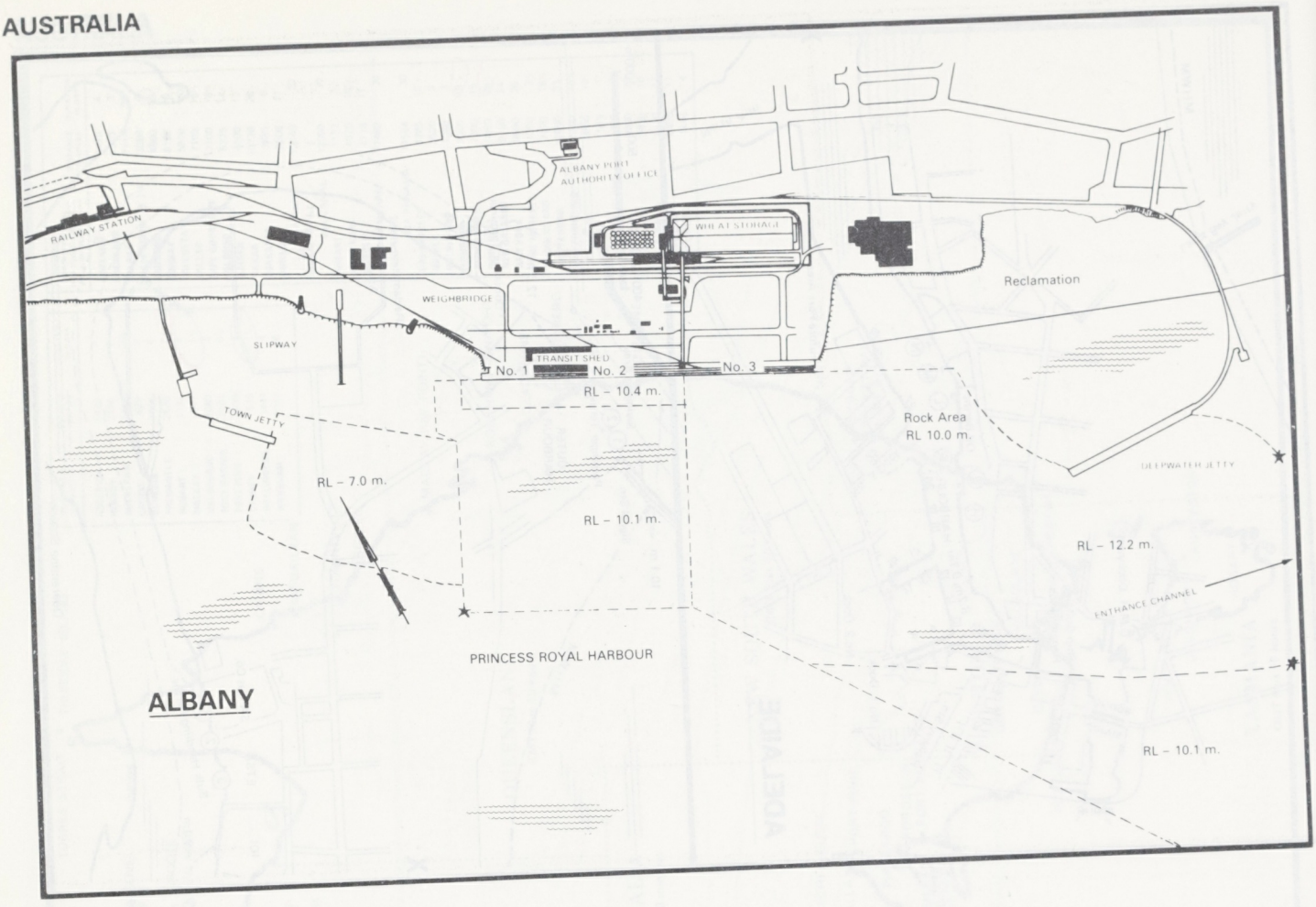
BRISBANE (VIA PANAMA) (VIA MAGELLAN) AT 16 KNOTS TO	DISTANCE IN MILES	DURATION IN DAYS
ADELAIDE	1475	4
AUCKLAND	1358	3½
BALBOA	7714	20
BALIK PAPAN	3098	8
BANGKOK	4600	12
BOMBAY	6196	16
CALCUTTA	5510	14½
CALLAO	7103	18½
CAPE GOOD HOPE	7100	18½
COLOMBO	5325	14
DAIREN	4500	12
DAKAR	10728	28
DJAKARTA	3485	9
DURBAN	6608	17
VIA CAPE	12140	32
GIBRALTAR VIA CANAL	12090	32
HOBART	1132	3
HONG KONG	4070	10½
HONOLULU	4118	11
VIA CAPE	11469	30
LAS PALMAS VIA PANAMA	11564	30
LOS ANGELES	6285	16½
MANILA	3520	9
MELBOURNE	1080	3
MOMBASA	7000	18½
MONTEVIDEO	7300	19
MONTREAL	10950	28½
NEW ORLEANS	9100	24
NEW YORK	9890	26
PORT MORESBY	1390	3½
QUOIN ISLAND	7070	18½
ROTTERDAM	12600	33
SAN FRANCISCO	6200	16½
SINGAPORE	3850	10
SYDNEY	515	1½
THURSDAY ISLAND	1320	3½
TRINIDAD	8900	23
YOKOHAMA	3930	10
VALPARAISO	6450	17
VANCOUVER	6490	17
WELLINGTON	1446	4

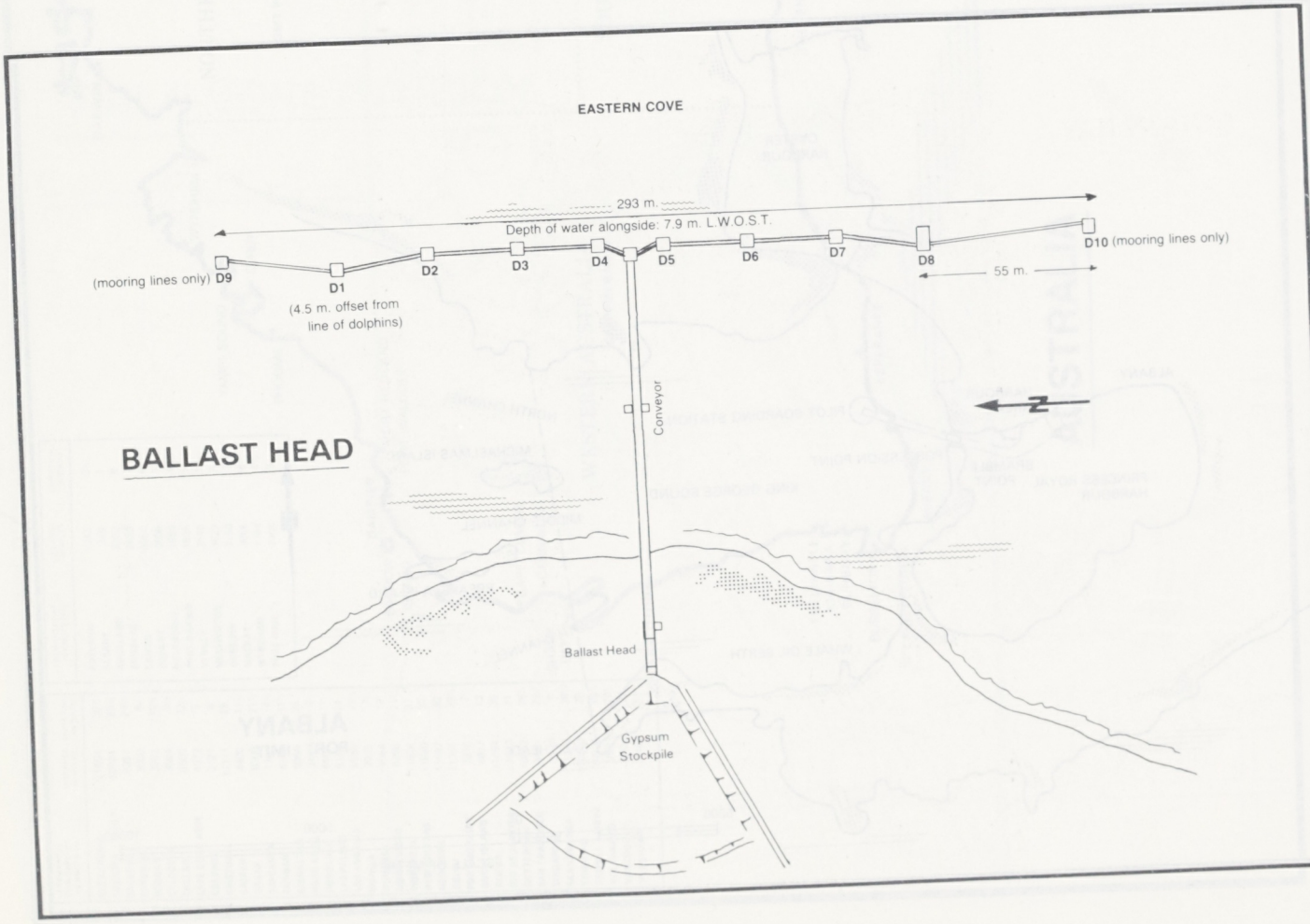
TORRES STRAIT
THURSDAY ISLAND
DARWIN
GOVE
WEIPA
GROOTE EYLANDT
WYNDHAM
YAMPI SOUND
DERBY
BROOME
NORTHERN TERRITORY
GMT Plus 9 hours 30 minutes
CAIRNS
MOURILYAN
TOWNSVILLE
BOWEN
MACKAY (HAY POINT)
ROCKHAMPTON/PORT ALMA
GLADSTONE
BUNDABERG
BRISBANE
BARROW ISLAND
DAMPIER
PORT HEDLAND
PORT WALCOTT
QUEENSLAND
GMT Plus 10 hours
CAPE CUVIER
CARNAVON
SHARK BAY
WESTERN AUSTRALIA
GMT Plus 8 hours
GERALDTON
SOUTH AUSTRALIA
GMT Plus 9 hours 30 minutes
NEW SOUTH WALES
GMT Plus 10 hours
NEWCASTLE
SYDNEY
BOTANY BAY
PORT KEMBLA
THEVENARD
PORT AUGUSTA
WHYALLA
PORT PIRIE
WALLAROO
PORT LINCOLN
ARDROSSAN
PORT ADELAIDE
PORT GILES
RAPID BAY
FREMANTLE
KWINANA
BUNBURY
BUSSELTON
CAPE LEEUWIN
ESPERANCE
ALBANY
VICTORIA
GMT Plus 10 hours
MELBOURNE
GEELONG
WESTERNPORT
PORTLAND
BURNIE
PORT LATTA
DEVONPORT
LAUNCESTON
HOBART
TASMANIA
GMT Plus 10 hours

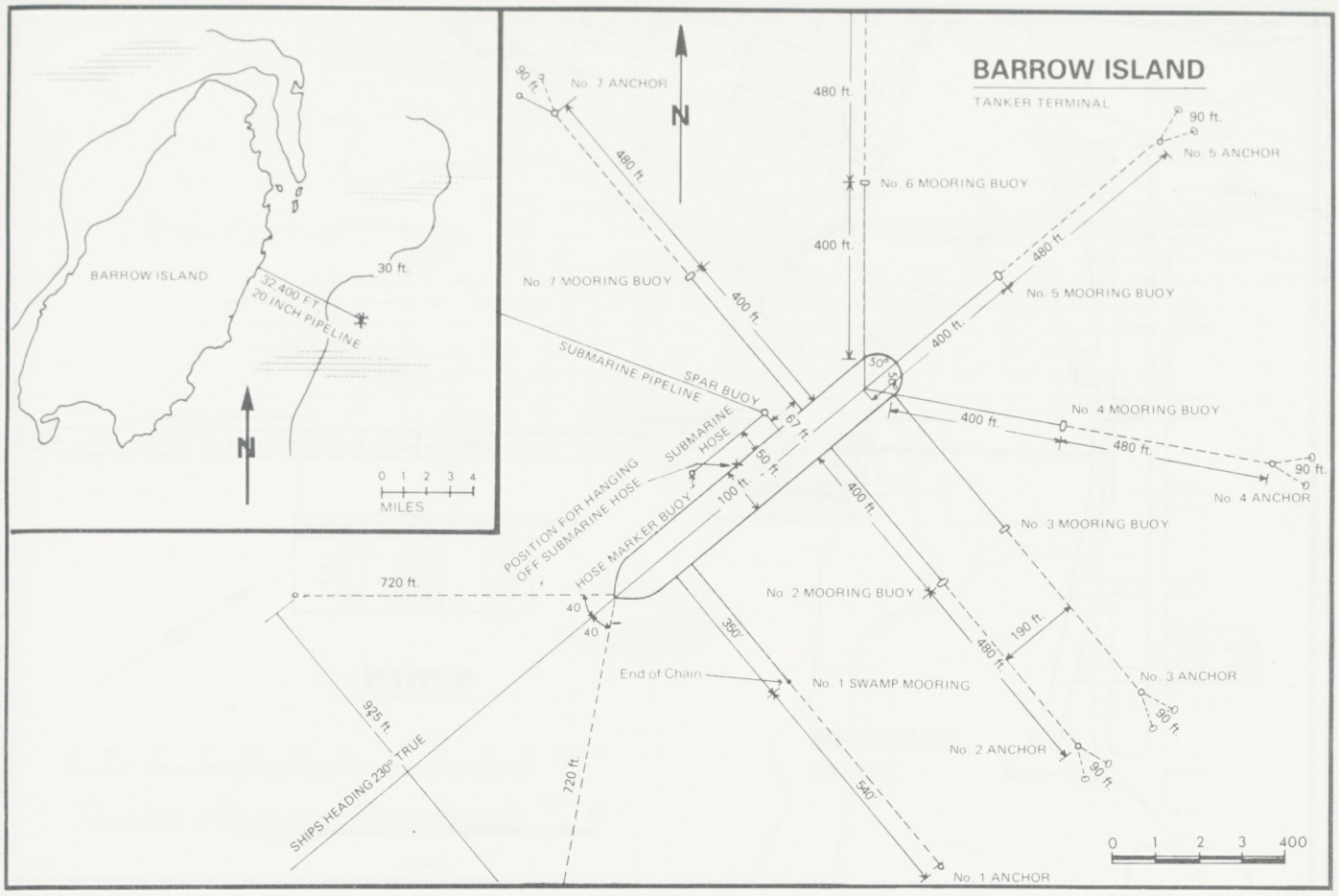
AUSTRALIA

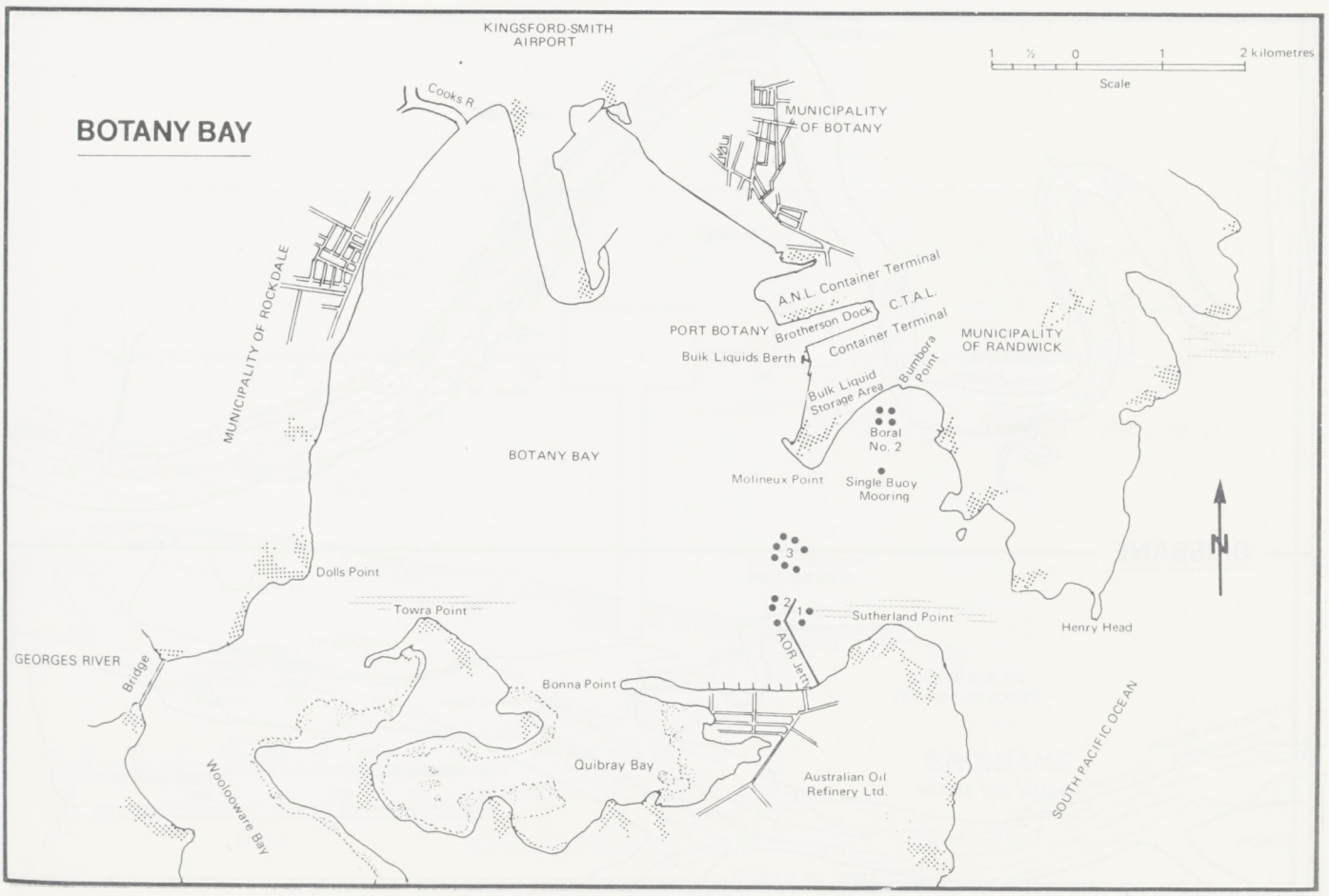

ADELAIDE
MHWM
Large Bay Jetty
North Arm
Future Port Area
Oil Berths
HARBOUR
INNER
9.1m
No.3 Dock
No.2 Dock
No.1 Dock
D.M.H. Dockyard
Ship Building
Repair Yards
Railway Stn.
Jarvis
Bridge
Bridge
1000m
500
0
200
400
Container Terminal
9.1 m.
12.0 m.
Reclamation
Areas
Pelican Pt.
Snapper Pt.
Swinging Area
Passenger Terminal
OUTER
HARBOUR
Signal Stn.
10.1 m.
MHWM
SA Gas Co.
ETSA
ICI
Bulk Handling Berths
Quarantine Station

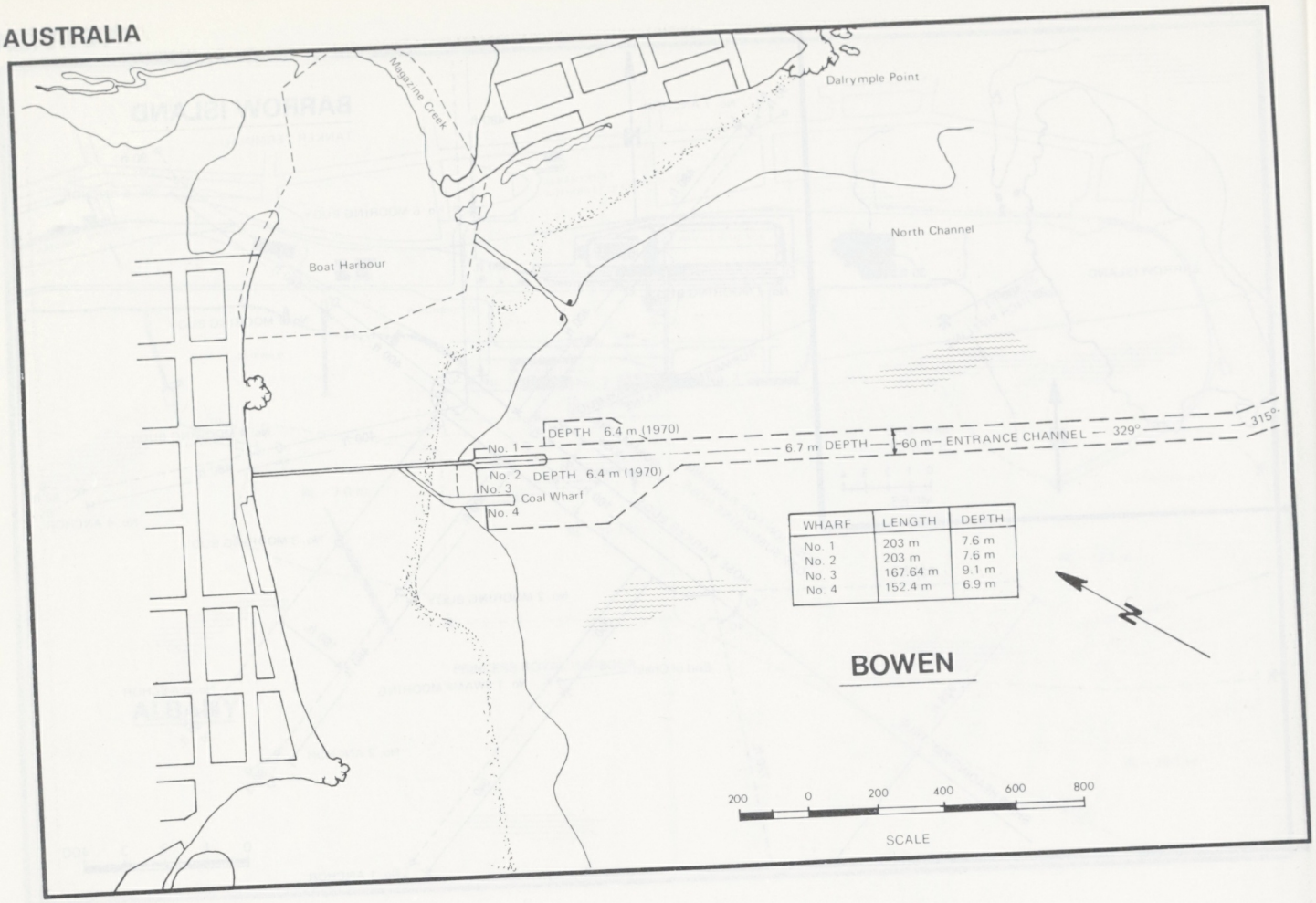

OYSTER
HARBOUR
ALBANY
HARBOUR
AREA
PILOT BOARDING STATION
POSSESSION POINT
BRAMBLE
POINT
PRINCESS ROYAL
HARBOUR
KING GEORGE SOUND
NORTH CHANNEL
MICHAELMAS ISLAND
MIDDLE CHANNEL
BREAKSEA ISLAND
SOUTH CHANNEL
WHALE OIL BERTH
BALD HEAD
N
ALBANY
PORT LIMIT
5000
0
5000
10000
SCALE OF METRES

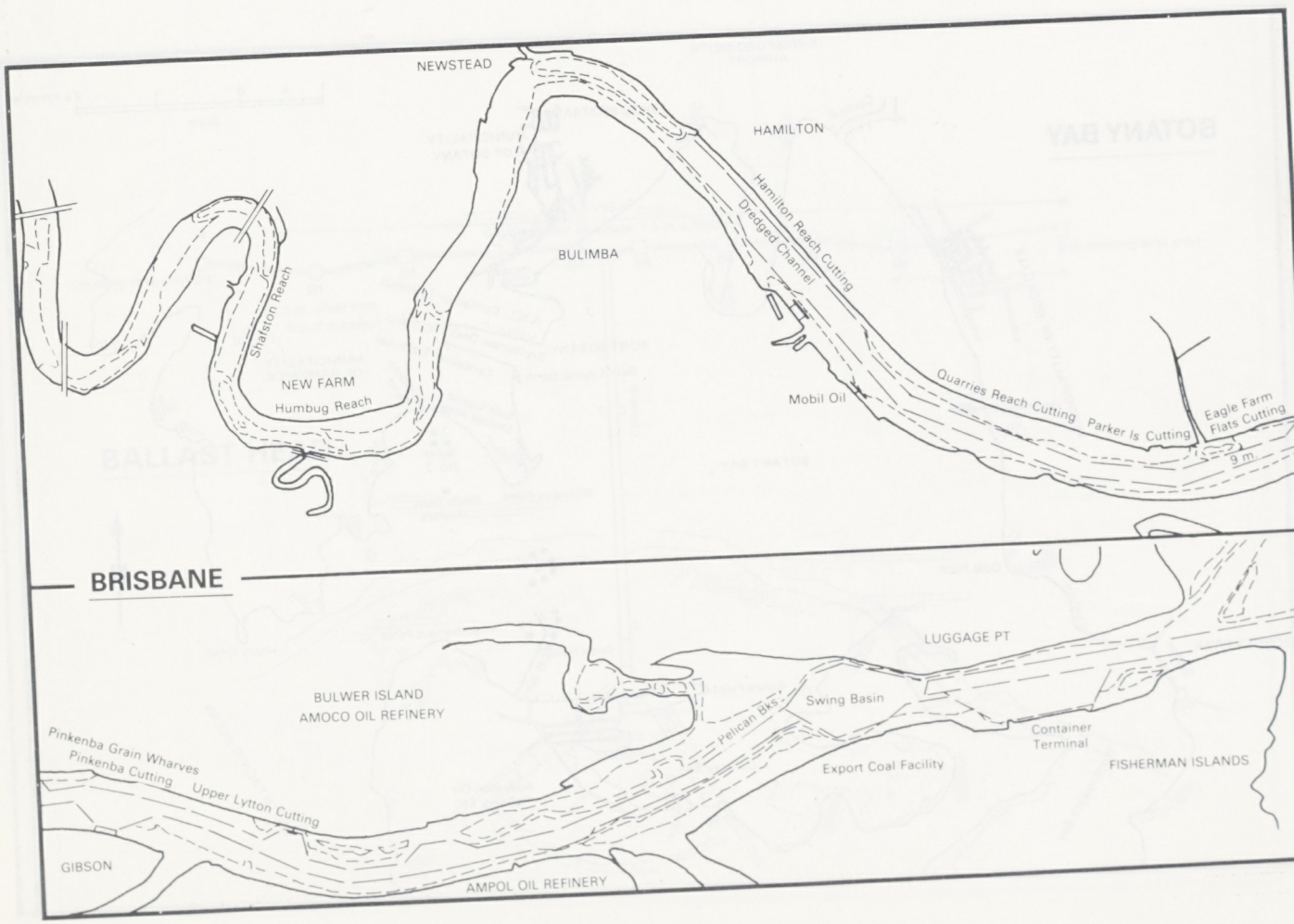

ALBANY PORT AUTHORITY OFFICE
RAILWAY STATION
WHEAT STORAGE
Reclamation
WEIGHBRIDGE
SLIPWAY
TRANSIT SHED
No. 1
No. 2
No. 3
RL – 10.4 m.
TOWN JETTY
Rock Area
RL 10.0 m.
DEEPWATER JETTY
RL – 7.0 m.
RL – 10.1 m.
RL – 12.2 m.
ENTRANCE CHANNEL
PRINCESS ROYAL HARBOUR
ALBANY
RL – 10.1 m.

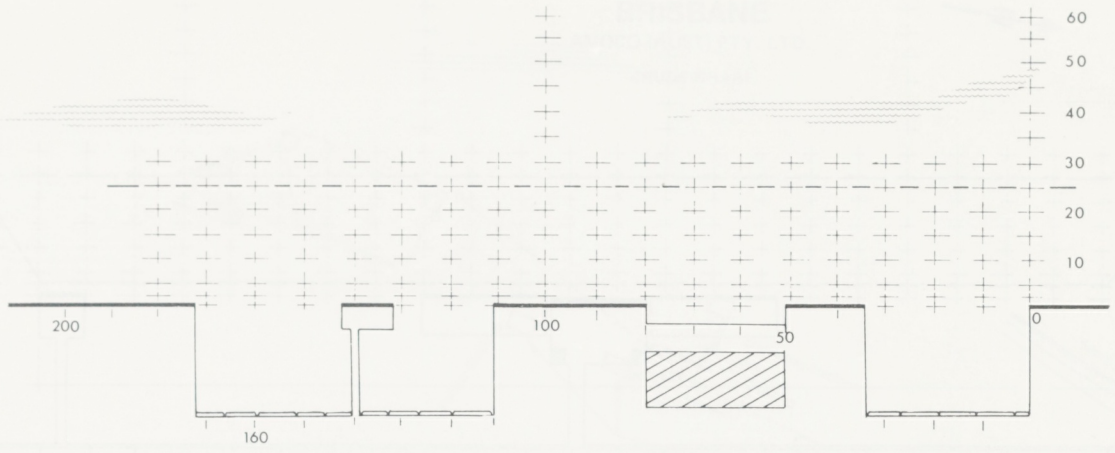

EASTERN COVE
293 m.
Depth of water alongside: 7.9 m. L.W.O.S.T.
(mooring lines only) D9
D1
(4.5 m. offset from line of dolphins)
D2
D3
D4
D5
D6
D7
D8
D10 (mooring lines only)
55 m.
Conveyor
BALLAST HEAD
Ballast Head
Gypsum Stockpile


BARROW ISLAND
BARROW ISLAND
TANKER TERMINAL
30 ft.
32,400 FT. 20 INCH PIPELINE
0 1 2 3 4
MILES
No. 7 ANCHOR
90 ft.
480 ft.
No. 6 MOORING BUOY
400 ft.
No. 7 MOORING BUOY
No. 5 ANCHOR
No. 5 MOORING BUOY
SUBMARINE PIPELINE
SPAR BUOY
SUBMARINE HOSE
67 ft.
50 ft.
100 ft.
No. 4 MOORING BUOY
No. 4 ANCHOR
POSITION FOR HANGING OFF SUBMARINE HOSE
HOSE MARKER BUOY
No. 3 MOORING BUOY
720 ft.
No. 2 MOORING BUOY
190 ft.
No. 3 ANCHOR
End of Chain
No. 1 SWAMP MOORING
925 ft.
SHIPS HEADING 230° TRUE
No. 2 ANCHOR
540'
No. 1 ANCHOR
0 1 2 3 400


BOTANY BAY
KINGSFORD-SMITH AIRPORT
Scale
1 ½ 0 1 2 kilometres
Cooks R.
MUNICIPALITY OF BOTANY
MUNICIPALITY OF ROCKDALE
A.N.L. Container Terminal
C.T.A.L. Container Terminal
Brotherson Dock
PORT BOTANY
Bulk Liquids Berth
MUNICIPALITY OF RANDWICK
Bulk Liquid Storage Area
Bumbora Point
Boral No. 2
BOTANY BAY
Molineux Point
Single Buoy Mooring
Dolls Point
Towra Point
Sutherland Point
Henry Head
GEORGES RIVER
Bridge
AOR Jetty
Bonna Point
Quibray Bay
Australian Oil Refinery Ltd.
Woolooware Bay
SOUTH PACIFIC OCEAN


Dalrymple Point
Magazine Creek
North Channel
Boat Harbour
DEPTH 6.4 m (1970)
No. 1
6.7 m DEPTH
60 m ENTRANCE CHANNEL
329°
315°
No. 2 DEPTH 6.4 m (1970)
No. 3
Coal Wharf
No. 4
WHARF | LENGTH | DEPTH
No. 1 | 203 m | 7.6 m
No. 2 | 203 m | 7.6 m
No. 3 | 167.64 m | 9.1 m
No. 4 | 152.4 m | 6.9 m
N
BOWEN
200 0 200 400 600 800
SCALE


NEWSTEAD
HAMILTON
Hamilton Reach Cutting
Dredged Channel
BULIMBA
Shafston Reach
NEW FARM
Humbug Reach
Mobil Oil
Quarries Reach Cutting
Parker Is Cutting
Eagle Farm Flats Cutting
9 m
BRISBANE
LUGGAGE PT
BULWER ISLAND
AMOCO OIL REFINERY
Swing Basin
Pelican Bks
Container Terminal
Pinkenba Grain Wharves
Pinkenba Cutting
Upper Lytton Cutting
Export Coal Facility
FISHERMAN ISLANDS
GIBSON
AMPOL OIL REFINERY



IN HAMILTON REACH
BRISBANE RIVER

BERTHING
LENGTH 160M
WIDTH 25M
DEPTH 9.1M

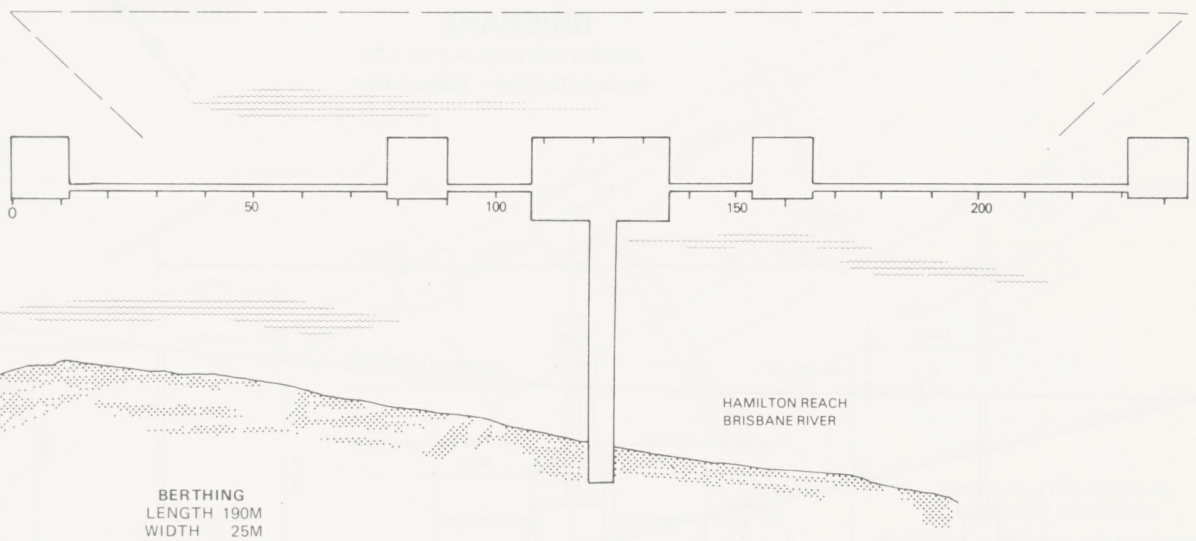
100 90 80 70 60 50 40 30 20 10 0 METRES

300 200 100 50 0 FEET

SCALE

BRISBANE

MARITIME



BERTHING
LENGTH 190M
WIDTH 25M
DEPTH 8M

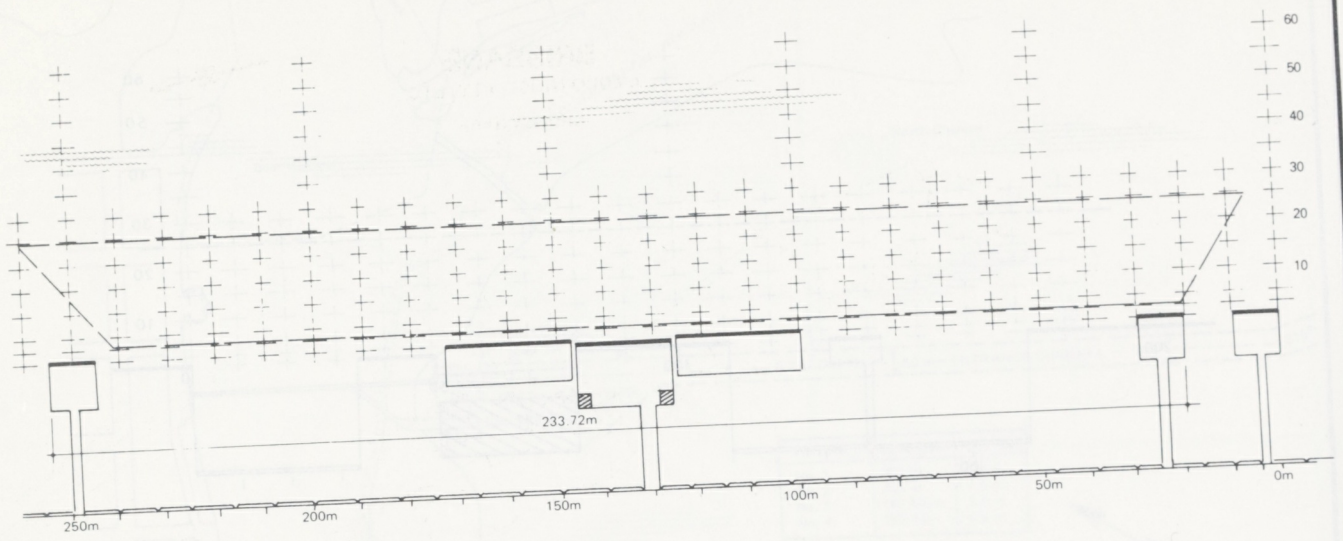
100 90 80 70 60 50 40 30 20 10 0 METRES

300 200 100 50 0 FEET

SCALE

BRISBANE

MOBIL OIL WHARF

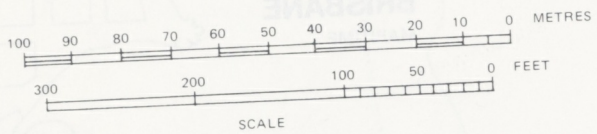


BERTHING
LENGTH 220M
WIDTH 25M
DEPTH 9.8M

PINKENBA AREA
BRISBANE RIVER

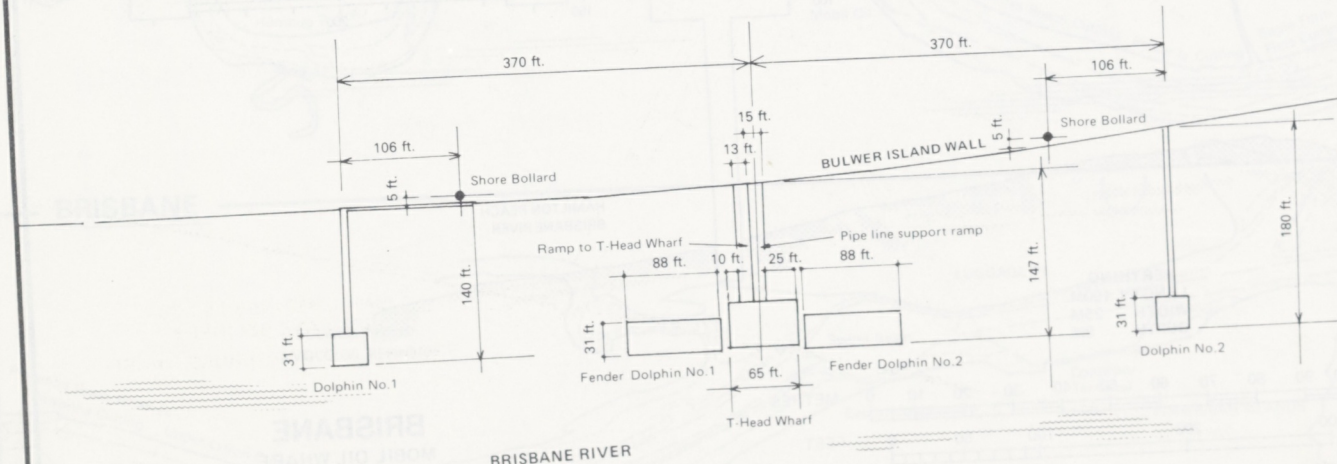
BRISBANE

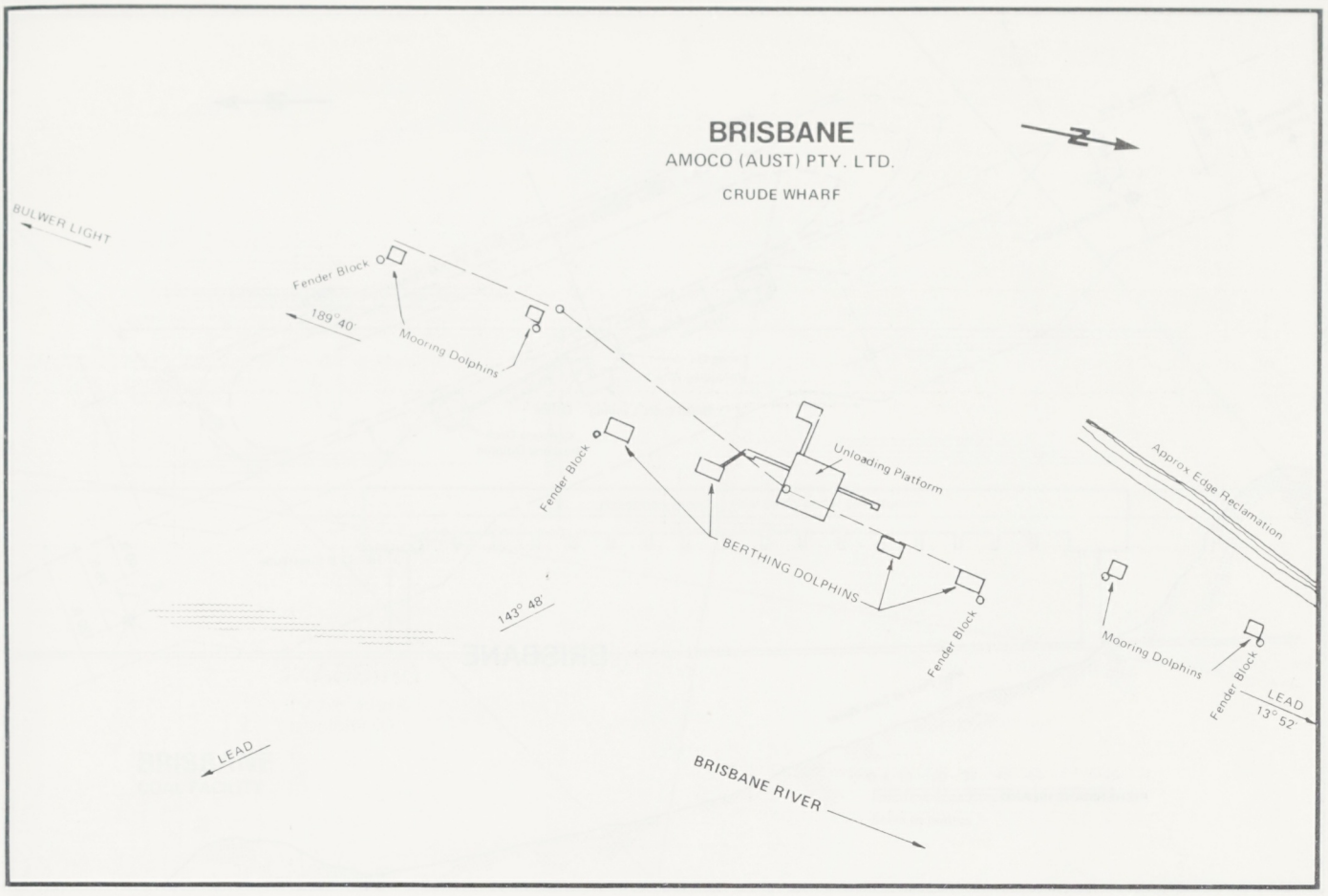
SHELL WHARF
(Oil Products)

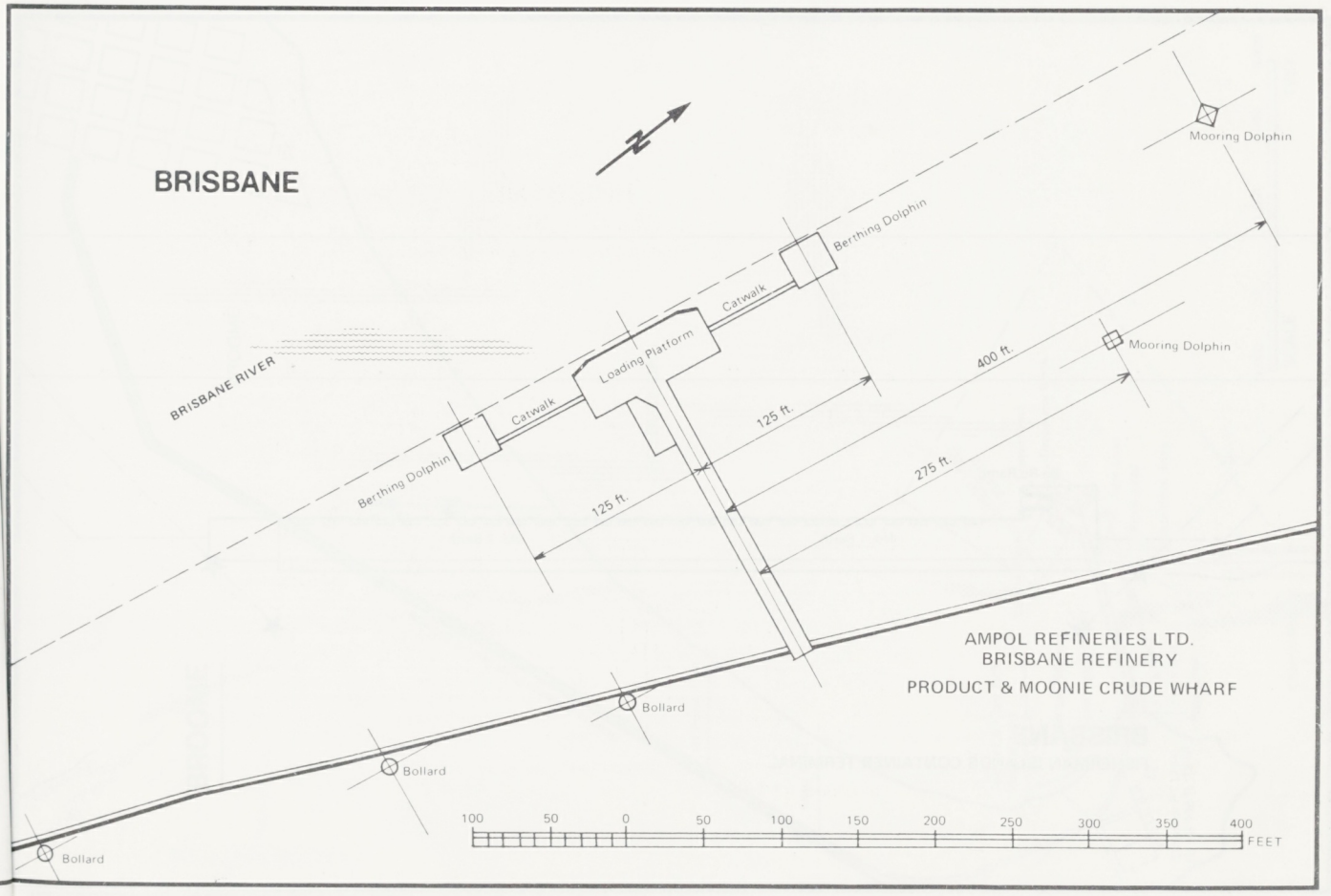


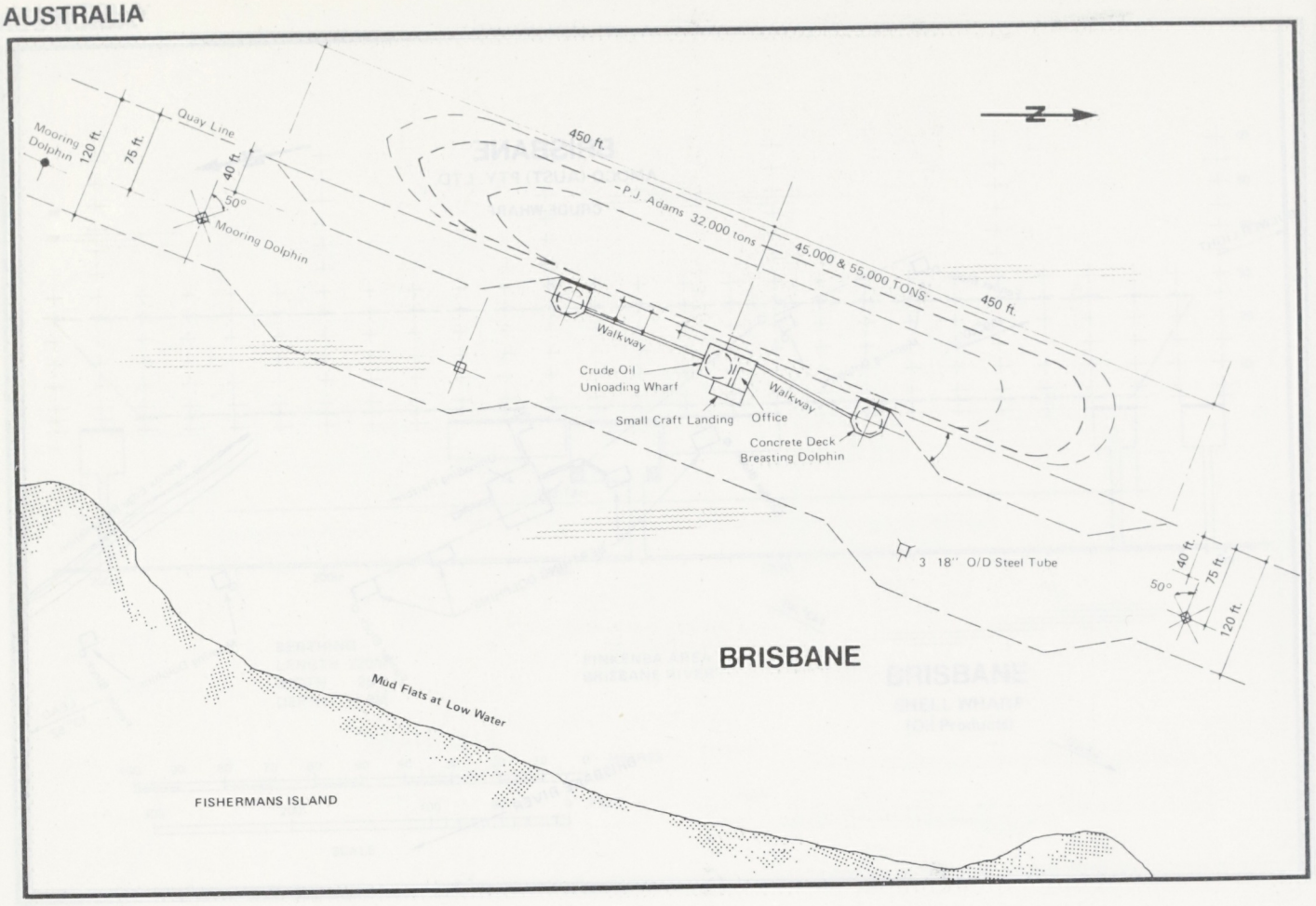
BRISBANE

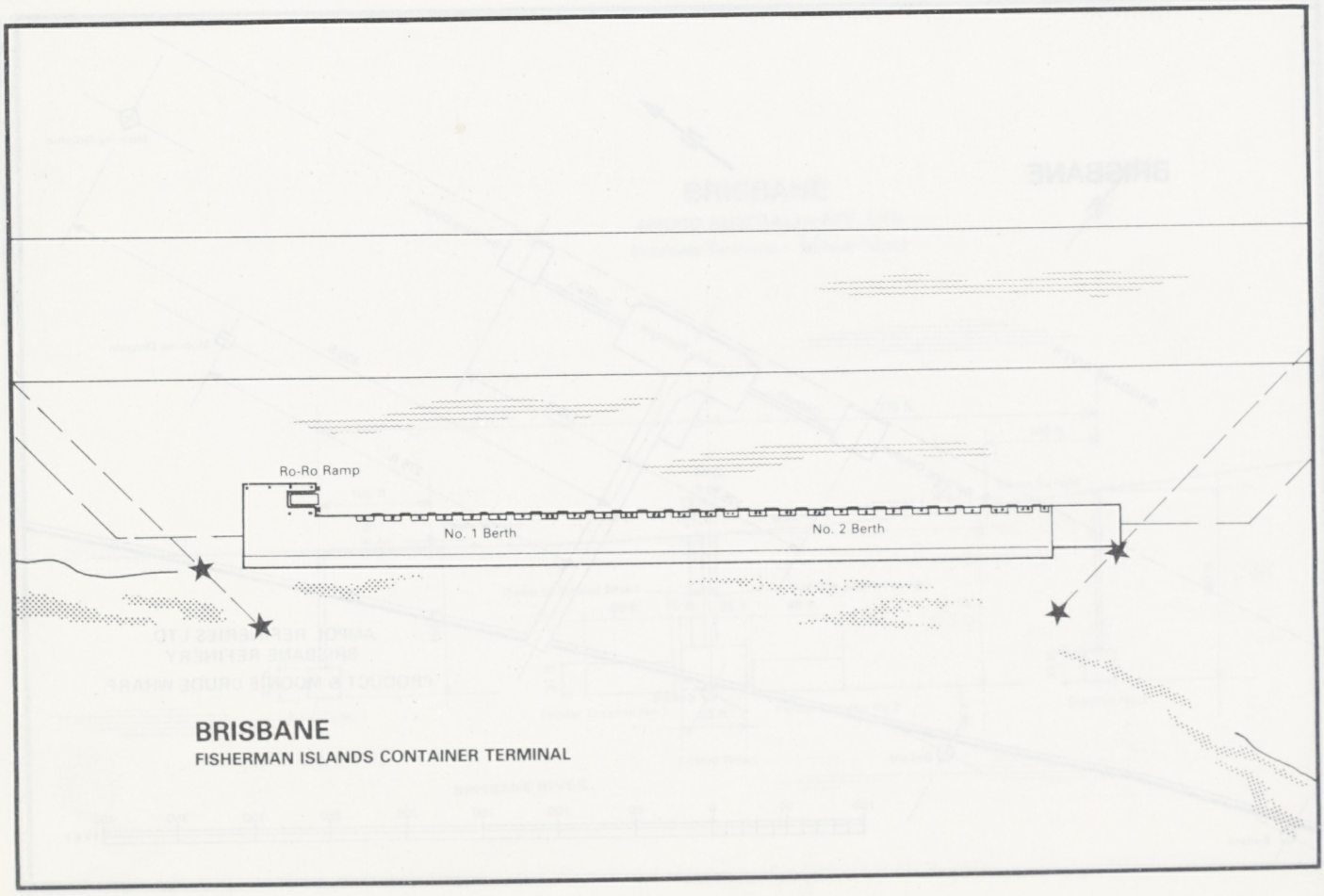
AMOCO AUSTRALIA PTY. LTD
Products Terminal – Bulwer Island

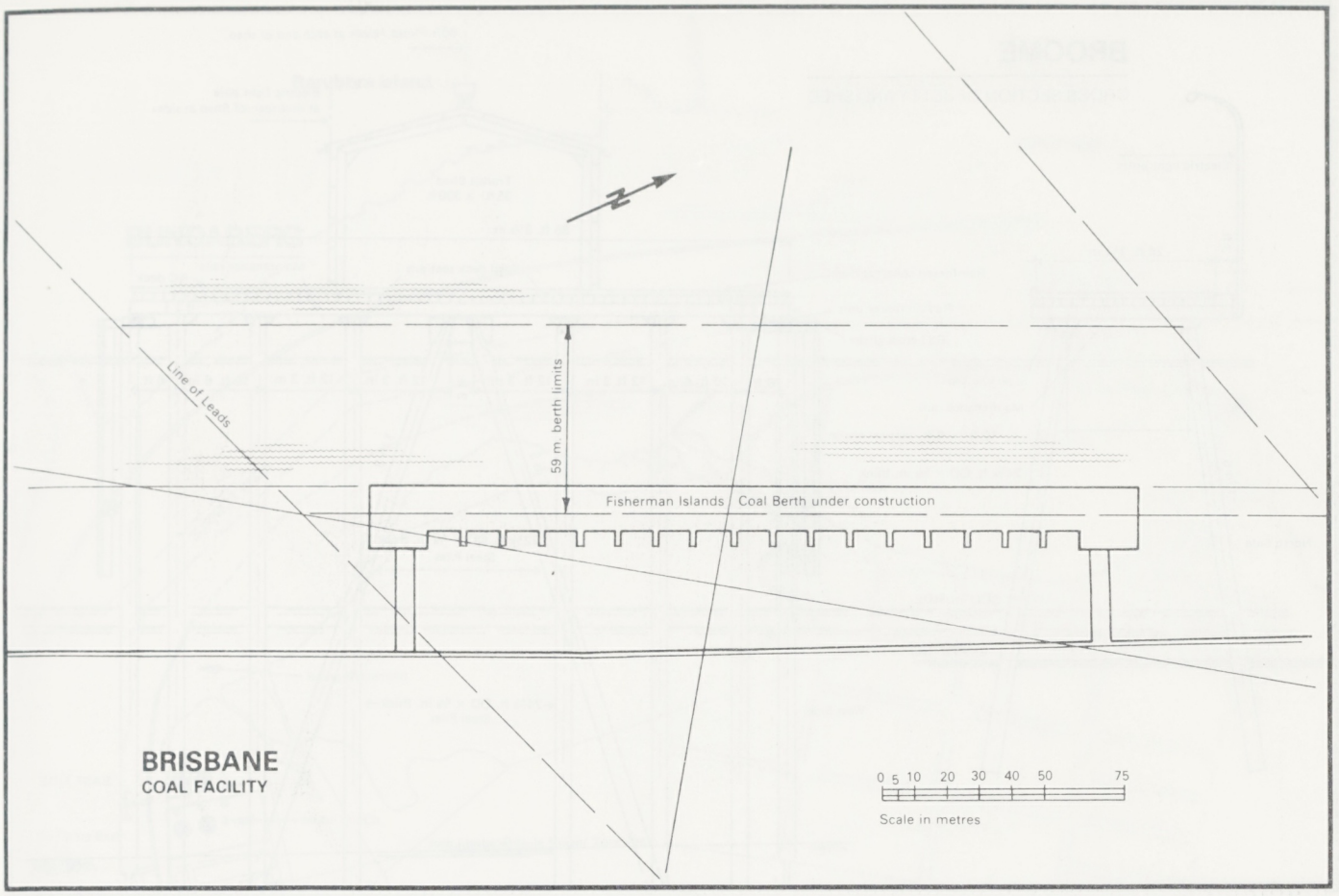



BRISBANE
AMOCO (AUST) PTY. LTD.
CRUDE WHARF
N
BULWER LIGHT
Fender Block
189° 40'
Mooring Dolphins
Fender Block
Unloading Platform
BERTHING DOLPHINS
Fender Block
143° 48'
Approx Edge Reclamation
Mooring Dolphins
Fender Block
LEAD
13° 52'
LEAD
BRISBANE RIVER

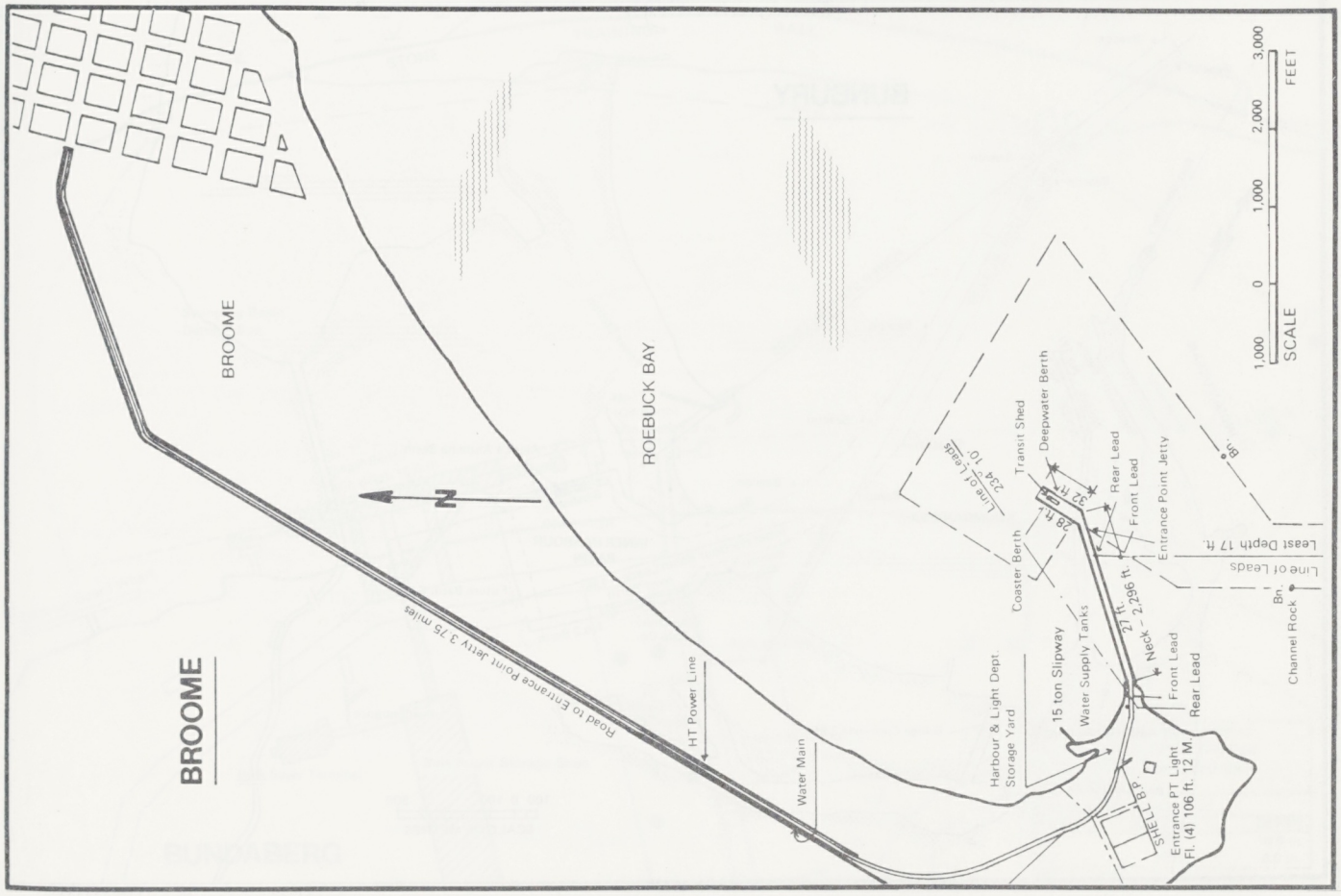

BRISBANE
N
Mooring Dolphin
Berthing Dolphin
Catwalk
Loading Platform
Mooring Dolphin
BRISBANE RIVER
Catwalk
400 ft.
125 ft.
275 ft.
Berthing Dolphin
125 ft.
AMPOL REFINERIES LTD.
BRISBANE REFINERY
PRODUCT & MOONIE CRUDE WHARF
Bollard
Bollard
Bollard
100 50 0 50 100 150 200 250 300 350 400
FEET


N
Mooring Dolphin
120 ft.
75 ft.
Quay Line
40 ft.
50°
Mooring Dolphin
450 ft.
P.J. Adams 32,000 tons
45,000 & 55,000 TONS
450 ft.
Walkway
Crude Oil Unloading Wharf
Small Craft Landing
Office
Walkway
Concrete Deck Breasting Dolphin
3 18" O/D Steel Tube
40 ft.
75 ft.
50°
120 ft.
BRISBANE
Mud Flats at Low Water
FISHERMANS ISLAND

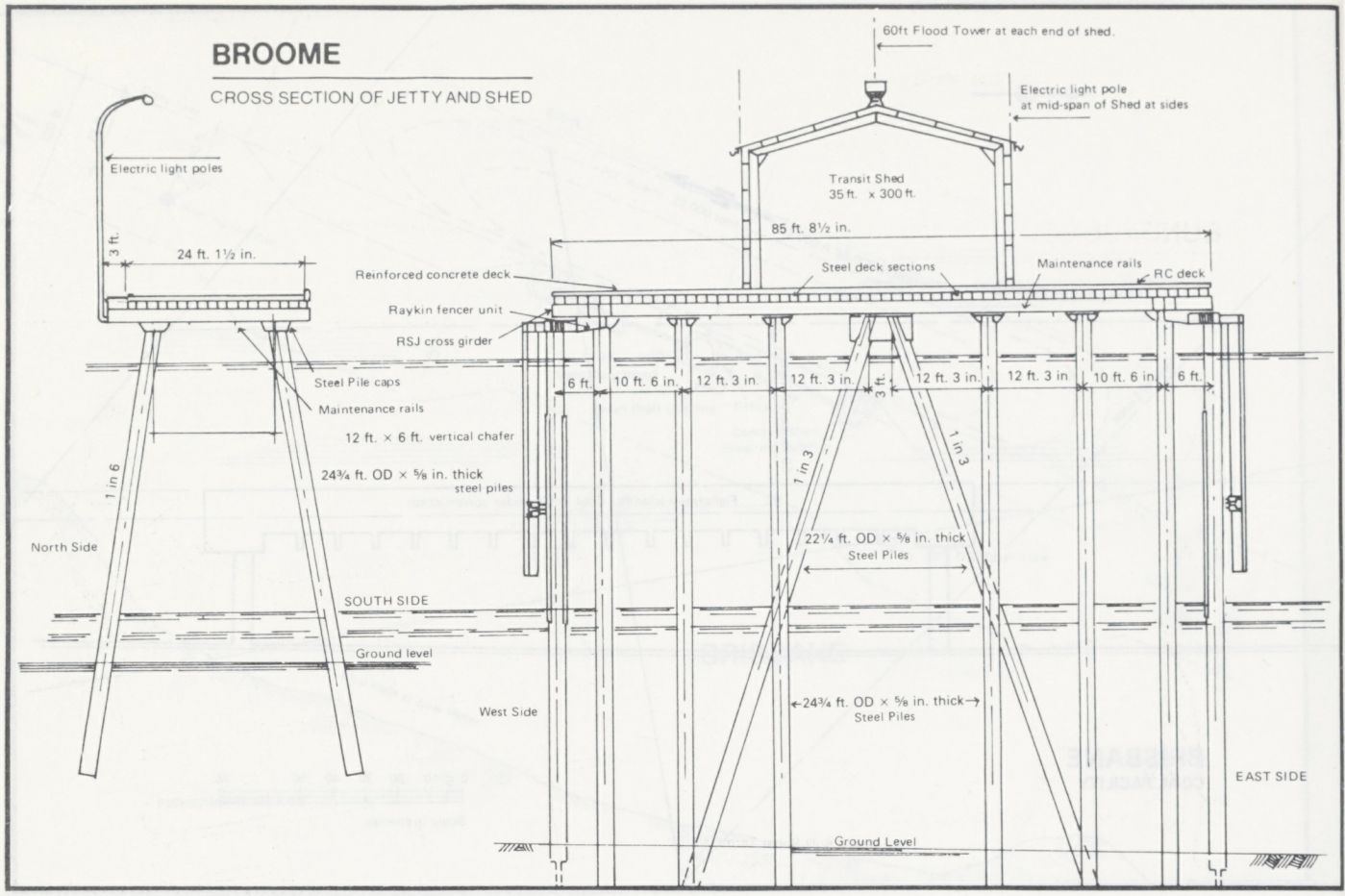

Ro-Ro Ramp
No. 1 Berth
No. 2 Berth
BRISBANE
FISHERMAN ISLANDS CONTAINER TERMINAL

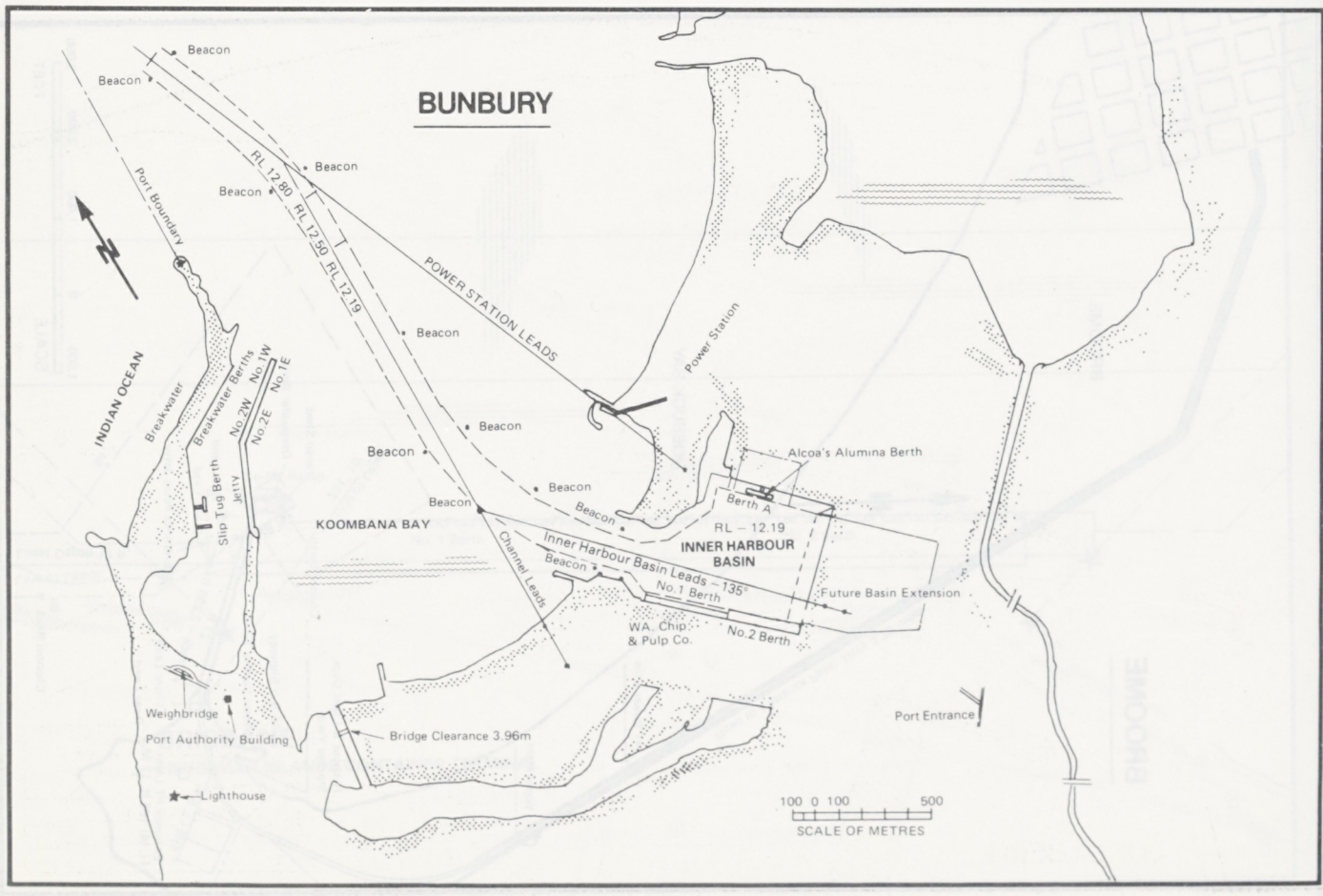


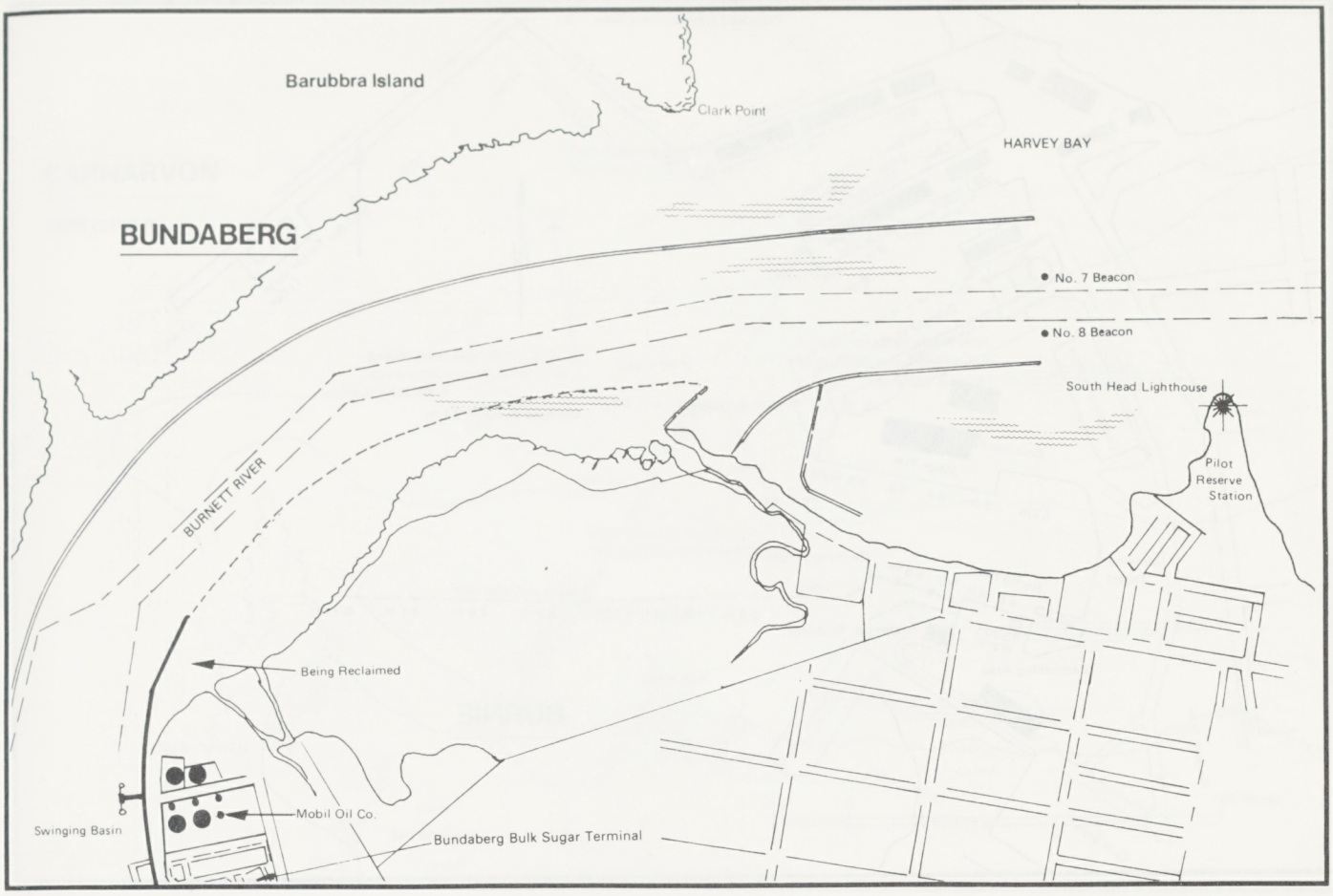
BRISBANE
COAL FACILITY

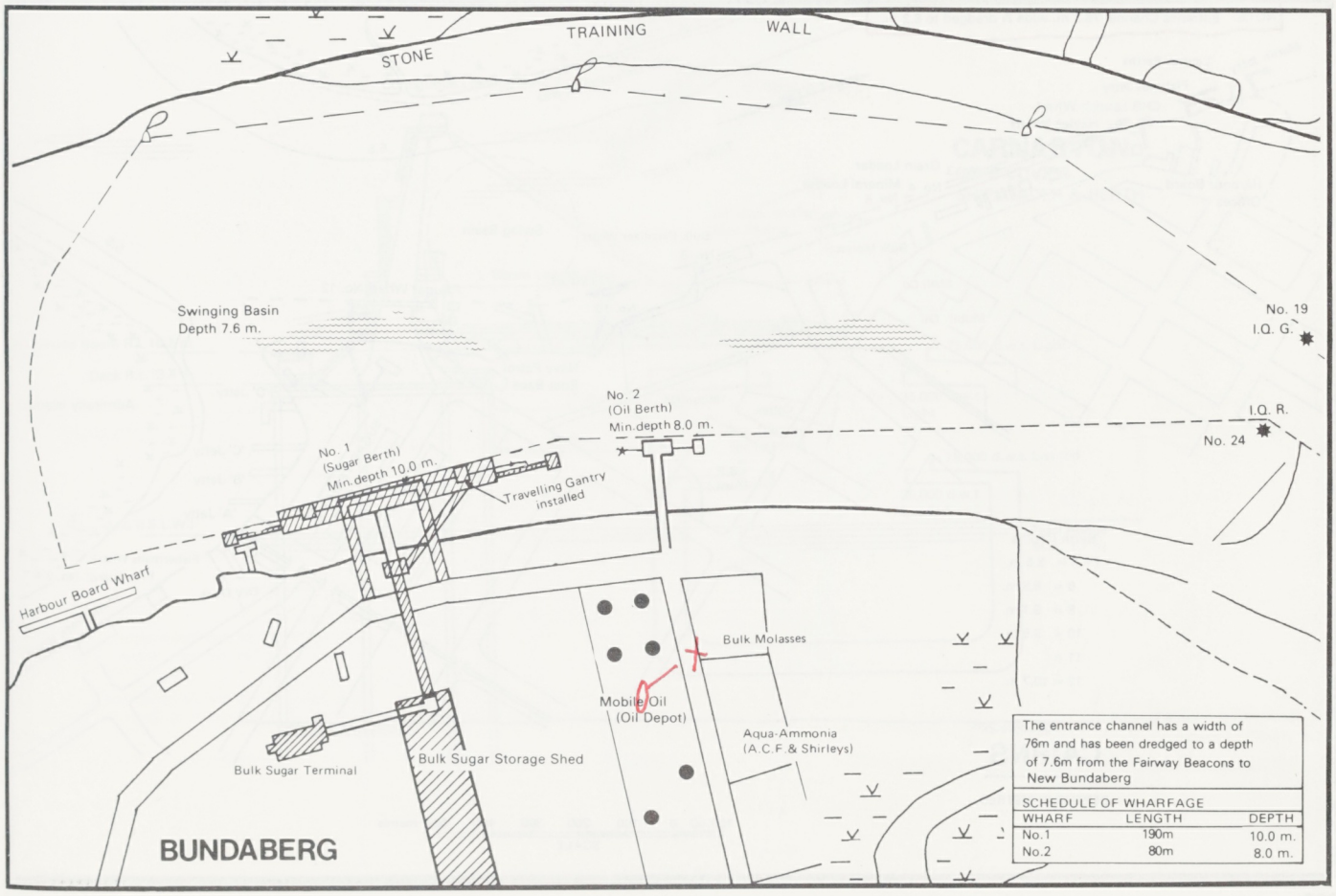


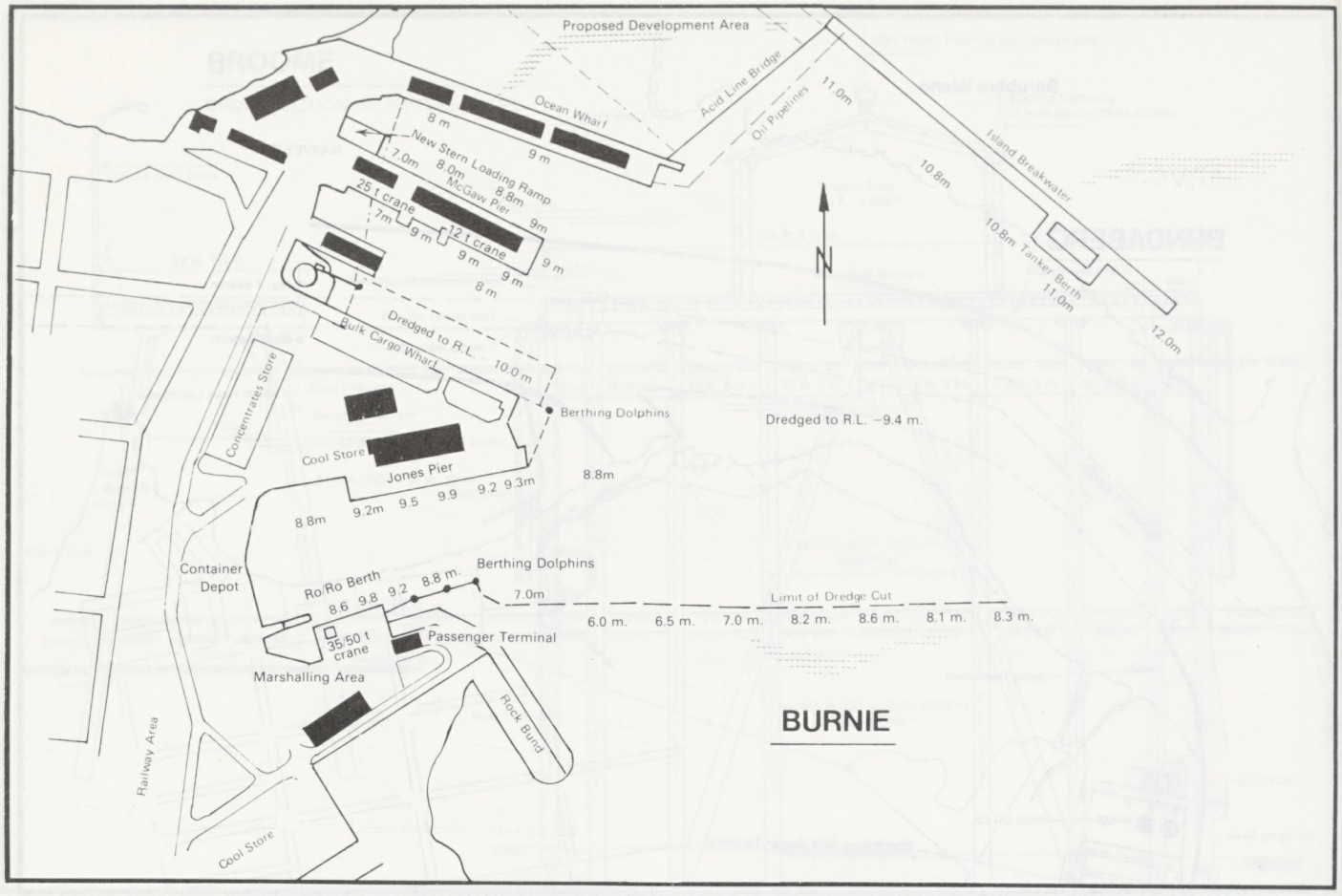
BROOME

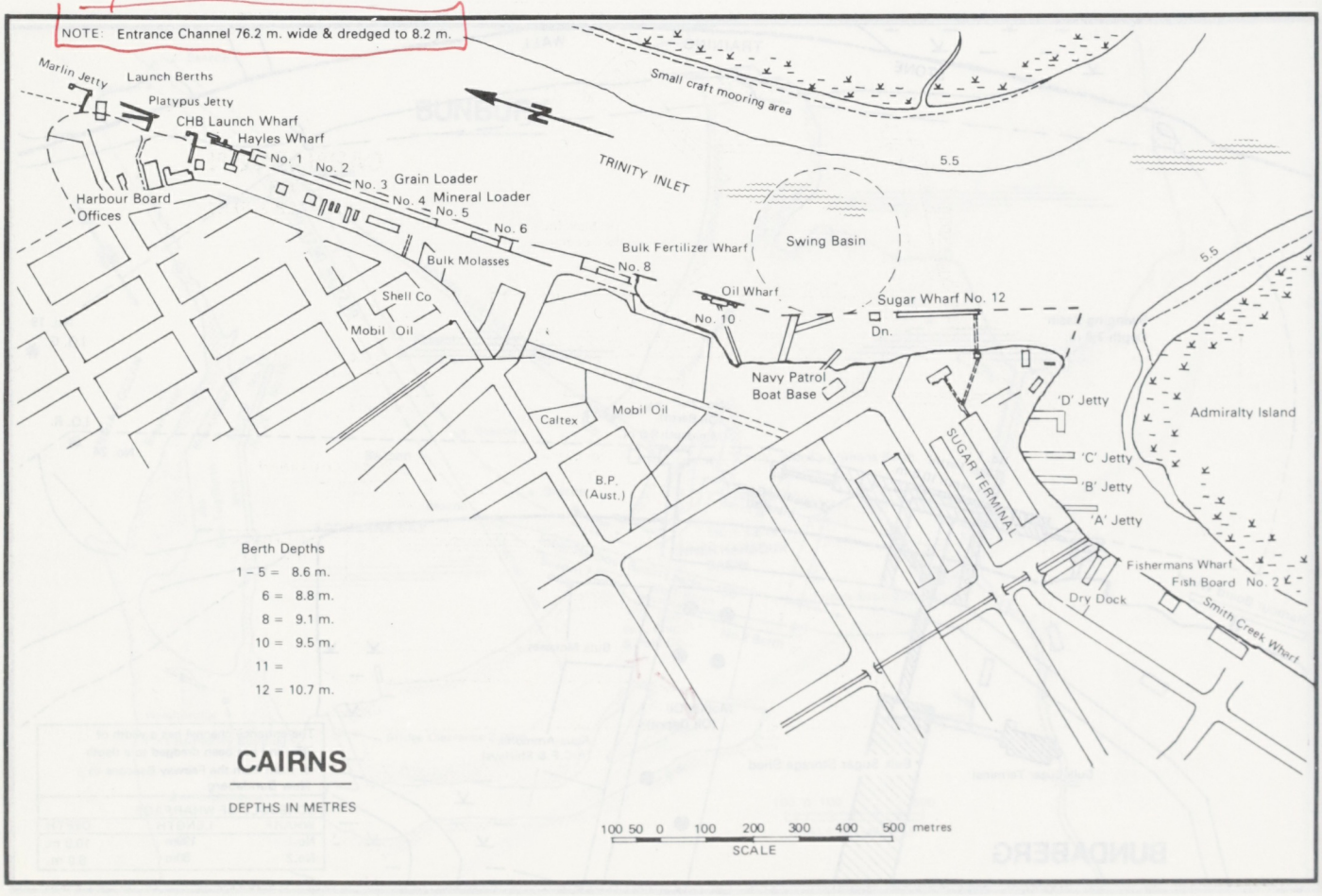

BROOME
CROSS SECTION OF JETTY AND SHED
60ft Flood Tower at each end of shed.
Electric light pole at mid-span of Shed at sides
Electric light poles
Transit Shed 35 ft. x 300 ft.
85 ft. 8½ in.
3 ft.
24 ft. 1½ in.
Reinforced concrete deck
Steel deck sections
Maintenance rails
RC deck
Raykin fencer unit
RSJ cross girder
Steel Pile caps
Maintenance rails
12 ft. × 6 ft. vertical chafer
24¾ ft. OD × ⅝ in. thick steel piles
1 in 6
North Side
SOUTH SIDE
Ground level
6 ft.
10 ft. 6 in.
12 ft. 3 in.
12 ft. 3 in.
3 ft.
12 ft. 3 in.
12 ft. 3 in
10 ft. 6 in.
6 ft.
1 in 3
1 in 3
22¼ ft. OD × ⅝ in. thick Steel Piles
West Side
24¾ ft. OD × ⅝ in. thick Steel Piles
EAST SIDE
Ground Level


BUNBURY
Beacon
Beacon
Beacon
Beacon
RL 12.80
RL 12.50
RL 12.19
POWER STATION LEADS
Port Boundary
INDIAN OCEAN
Breakwater
Breakwater Berths
No.2W
No.1W
No.2E
No.1E
Slip Tug Berth
Jetty
KOOMBANA BAY
Power Station
Alcoa's Alumina Berth
Berth A
RL – 12.19
INNER HARBOUR BASIN
Inner Harbour Basin Leads – 135°
No.1 Berth
No.2 Berth
Future Basin Extension
Channel Leads
WA. Chip & Pulp Co.
Weighbridge
Port Authority Building
Lighthouse
Bridge Clearance 3.96m
Port Entrance
100 0 100 500
SCALE OF METRES


Barubbra Island
Clark Point
HARVEY BAY
BUNDABERG
No. 7 Beacon
No. 8 Beacon
South Head Lighthouse
Pilot Reserve Station
BURNETT RIVER
Being Reclaimed
Swinging Basin
Mobil Oil Co.
Bundaberg Bulk Sugar Terminal

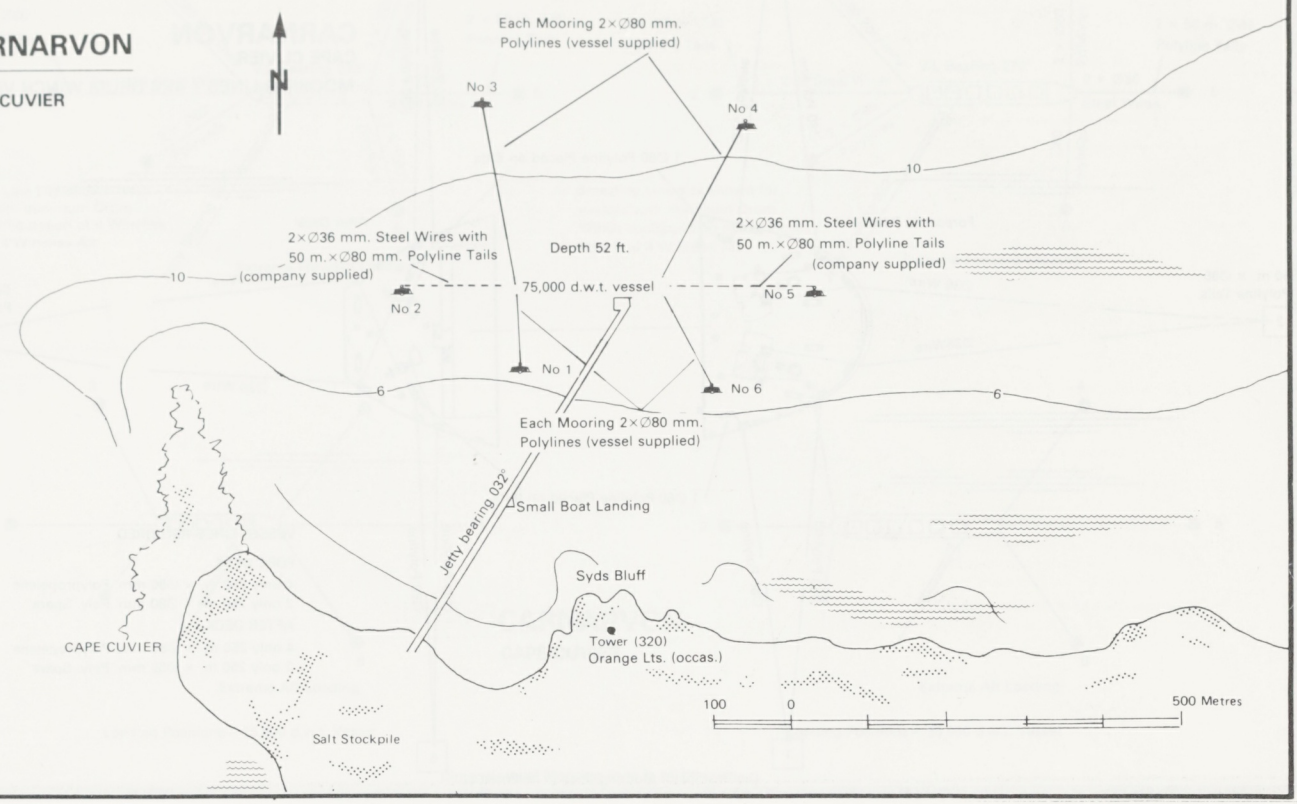

STONE
TRAINING
WALL
Swinging Basin
Depth 7.6 m.
No. 19
I.Q. G.
No. 2
(Oil Berth)
Min.depth 8.0 m.
I.Q. R.
No. 24
No. 1
(Sugar Berth)
Min.depth 10.0 m.
Travelling Gantry installed
Harbour Board Wharf
Bulk Molasses
Mobile Oil
(Oil Depot)
Aqua-Ammonia
(A.C.F. & Shirleys)
Bulk Sugar Terminal
Bulk Sugar Storage Shed
BUNDABERG
The entrance channel has a width of 76m and has been dredged to a depth of 7.6m from the Fairway Beacons to New Bundaberg
SCHEDULE OF WHARFAGE
WHARF LENGTH DEPTH
No.1 190m 10.0 m.
No.2 80m 8.0 m.


Proposed Development Area
Ocean Wharf
Acid Line Bridge
Oil Pipelines
11.0m
Island Breakwater
10.8m
10.8m Tanker Berth
11.0m
12.0m
8 m
9 m
New Stern Loading Ramp
7.0m
8.0m
8.8m
McGaw Pier
9m
25 t crane
7m
9 m
12 t crane
9 m
9 m
9 m
8 m
Dredged to R.L. 10.0 m
Bulk Cargo Wharf
Concentrates Store
Berthing Dolphins
Dredged to R.L. −9.4 m.
Cool Store
Jones Pier
8.8m
8.8m
9.2m
9.5
9.9
9.2
9.3m
Container Depot
Ro/Ro Berth
8.6
9.8
9.2
8.8 m.
Berthing Dolphins
7.0m
Limit of Dredge Cut
6.0 m.
6.5 m.
7.0 m.
8.2 m.
8.6 m.
8.1 m.
8.3 m.
35/50 t crane
Passenger Terminal
Marshalling Area
Rock Bund
Railway Area
Cool Store
BURNIE


NOTE: Entrance Channel 76.2 m. wide & dredged to 8.2 m.
Marlin Jetty
Launch Berths
Platypus Jetty
CHB Launch Wharf
Hayles Wharf
No. 1
No. 2
No. 3 Grain Loader
No. 4 Mineral Loader
No. 5
No. 6
Harbour Board Offices
Bulk Molasses
Bulk Fertilizer Wharf
No. 8
Shell Co
Mobil Oil
Oil Wharf
No. 10
Swing Basin
Small craft mooring area
TRINITY INLET
5.5
Sugar Wharf No. 12
Dn.
Navy Patrol Boat Base
Caltex
Mobil Oil
B.P. (Aust.)
SUGAR TERMINAL
'D' Jetty
'C' Jetty
'B' Jetty
'A' Jetty
Admiralty Island
Fishermans Wharf
Fish Board No. 2
Dry Dock
Smith Creek Wharf
Berth Depths
1 – 5 = 8.6 m.
6 = 8.8 m.
8 = 9.1 m.
10 = 9.5 m.
11 =
12 = 10.7 m.
CAIRNS
DEPTHS IN METRES
100 50 0 100 200 300 400 500 metres
SCALE

CARNARVON

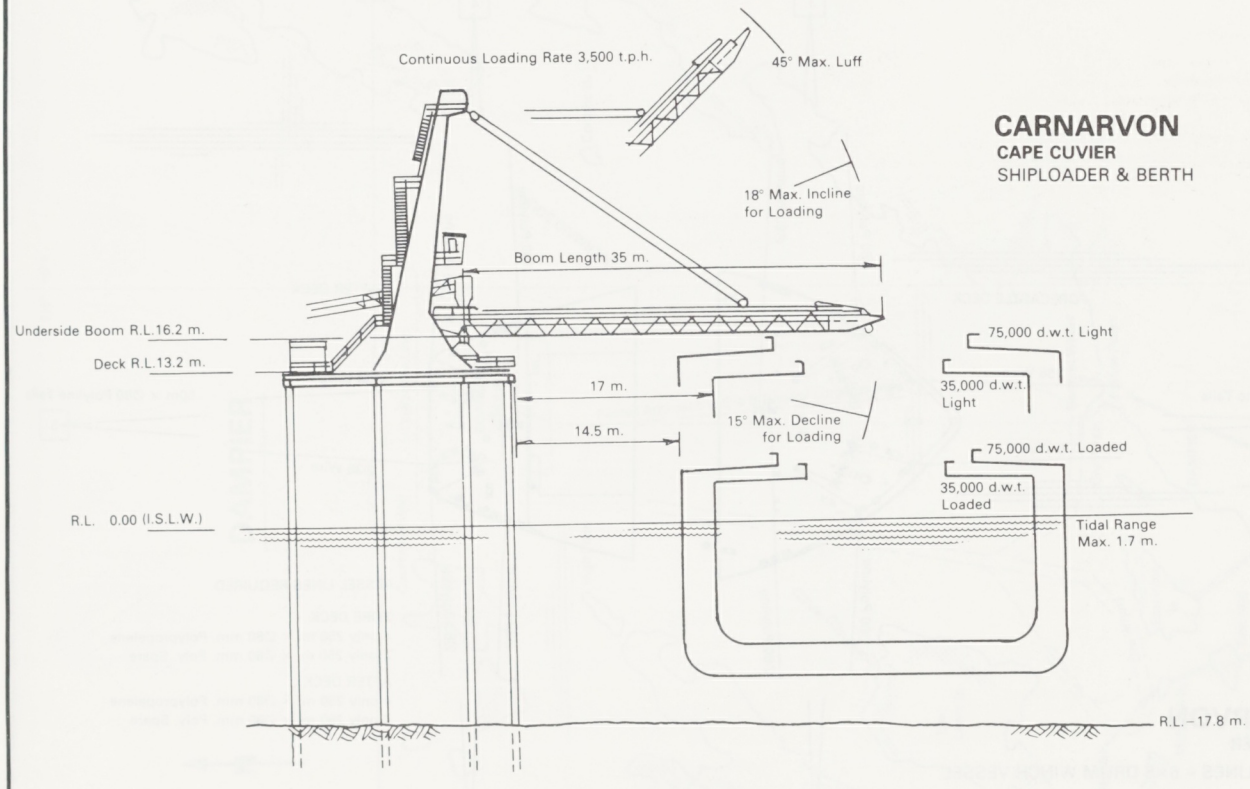
CAPE CUVIER

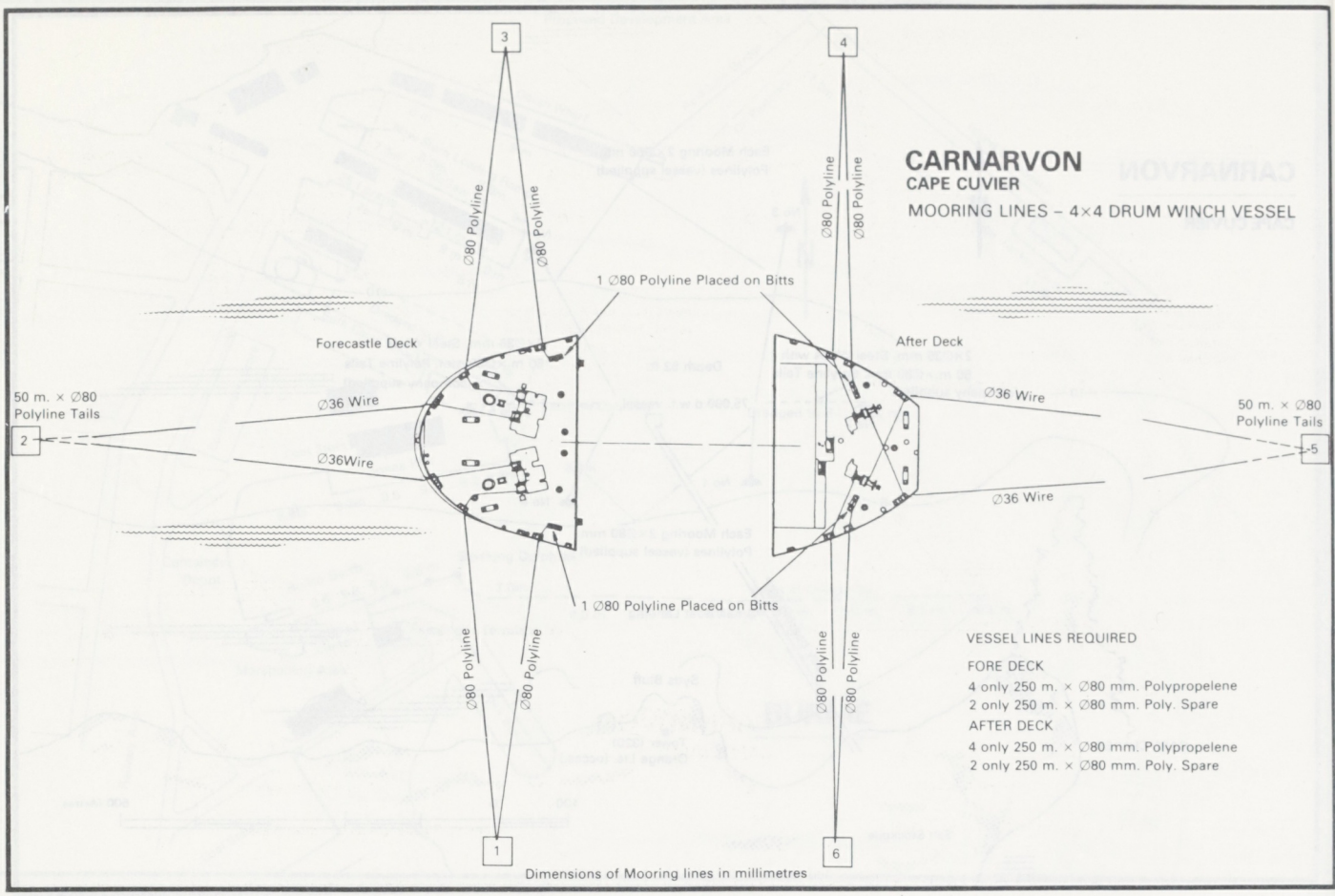


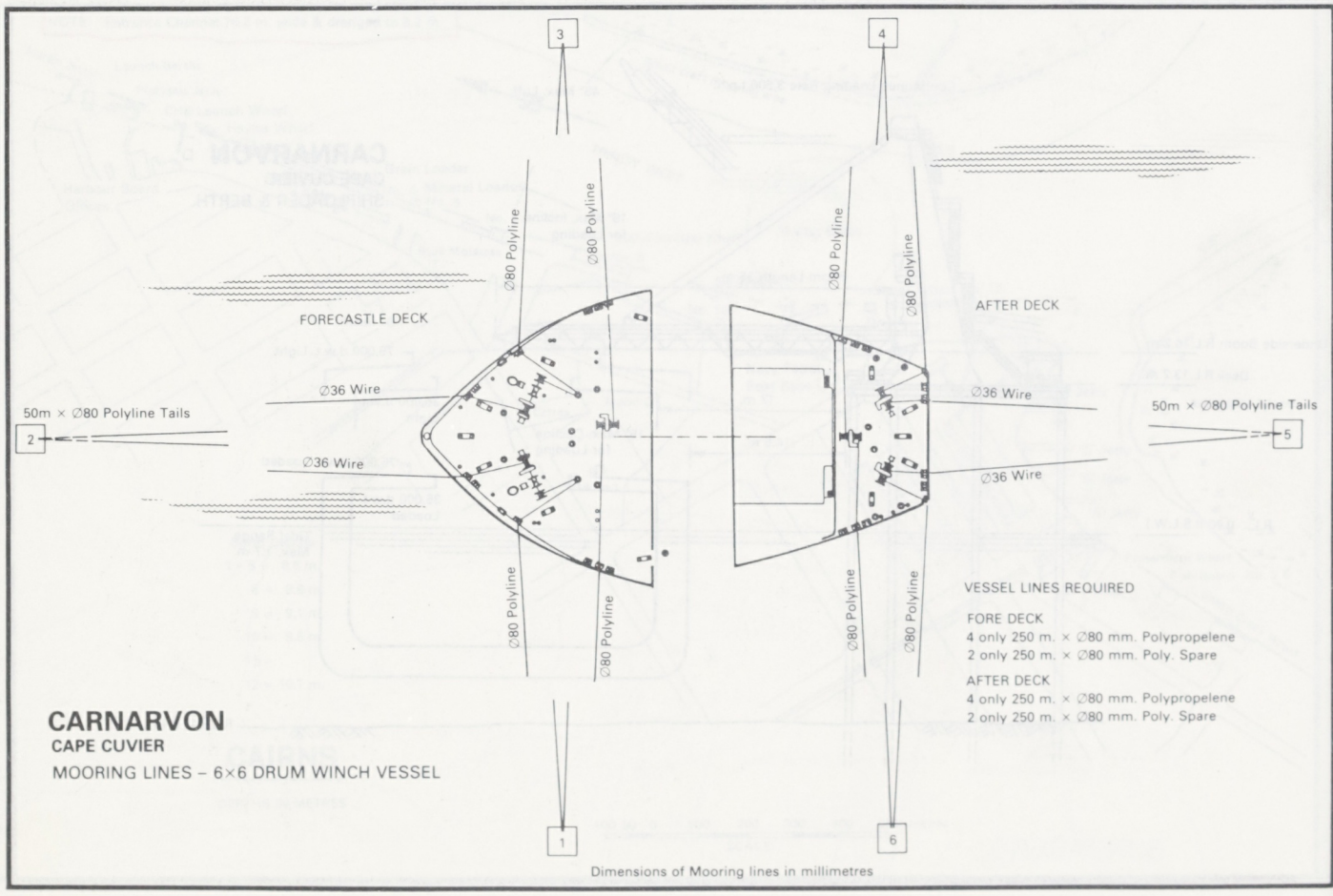
CARNARVON

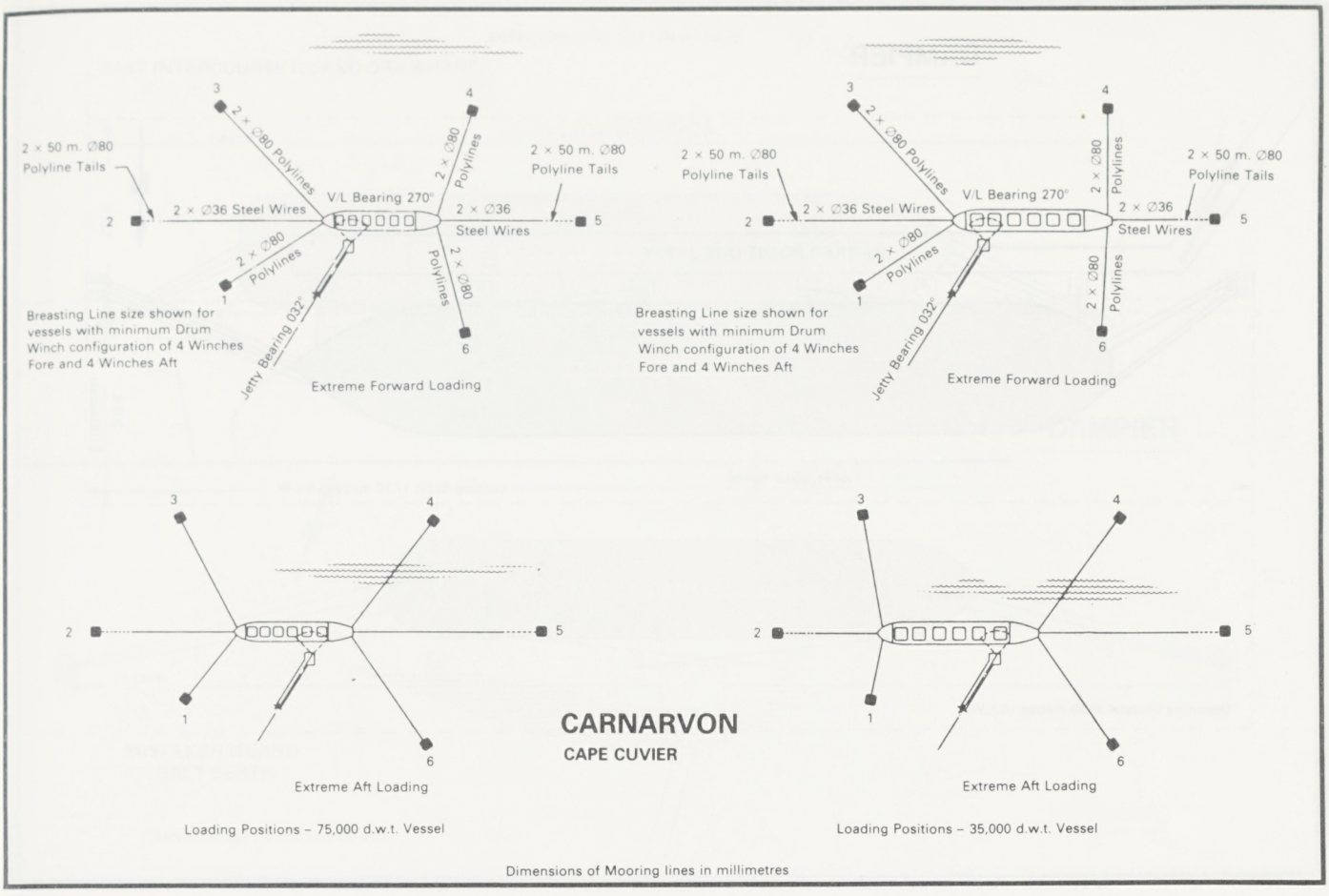
CAPE CUVIER

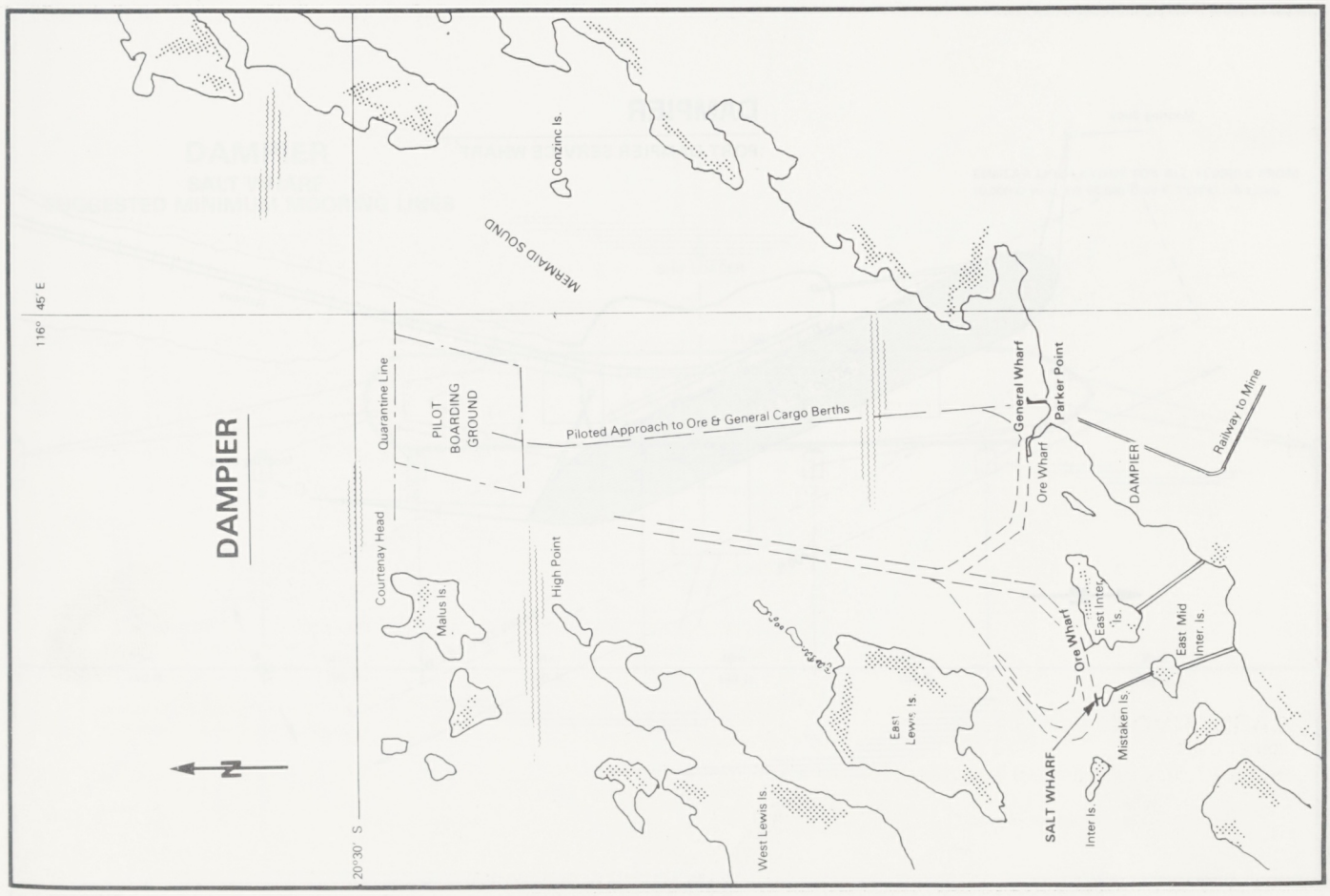
SHIPLOADER & BERTH



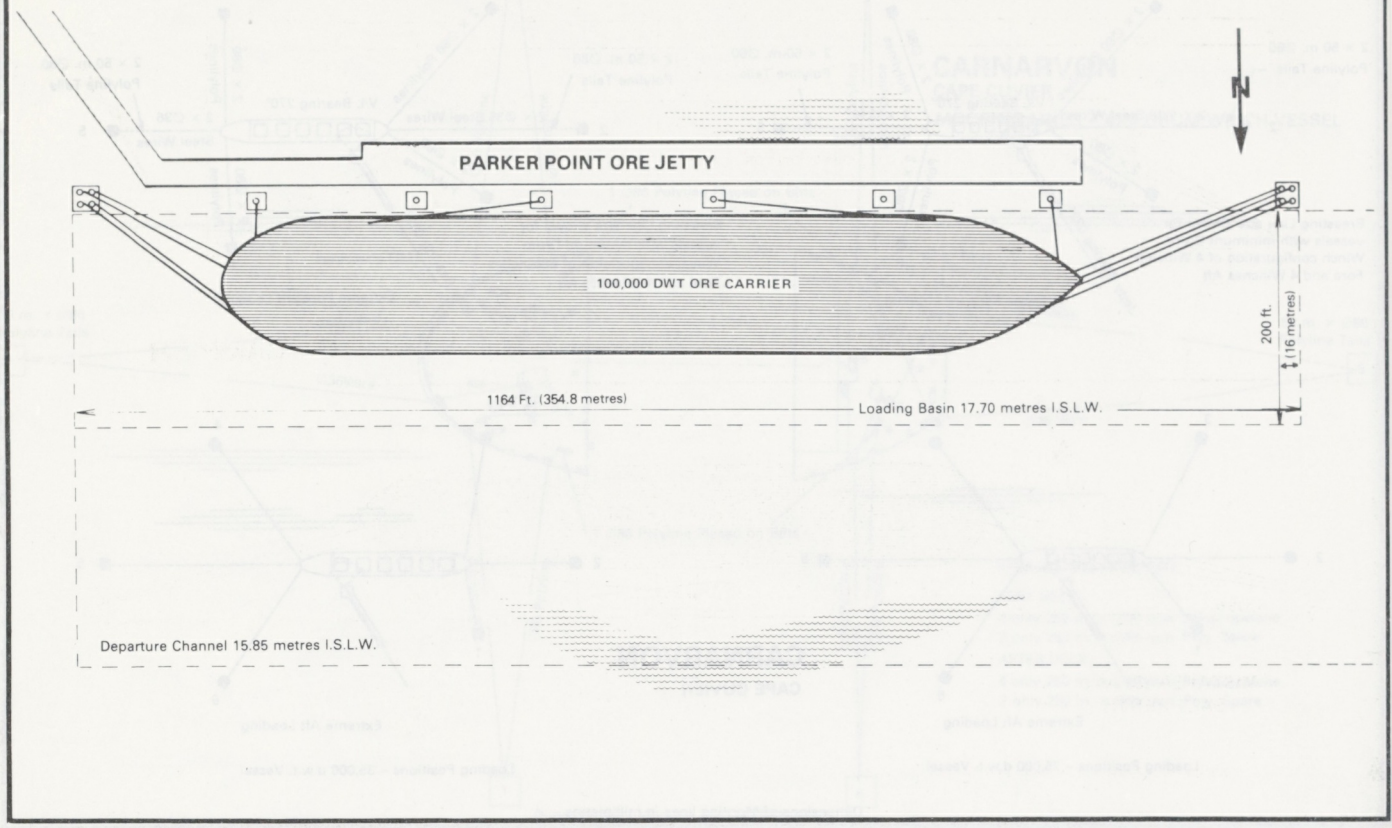

CARNARVON
CAPE CUVIER
MOORING LINES – 4×4 DRUM WINCH VESSEL
3
4
1
6
2
5
Ø80 Polyline
1 Ø80 Polyline Placed on Bitts
Forecastle Deck
After Deck
50 m. × Ø80 Polyline Tails
Ø36 Wire
Ø36Wire
VESSEL LINES REQUIRED
FORE DECK
4 only 250 m. × Ø80 mm. Polypropelene
2 only 250 m. × Ø80 mm. Poly. Spare
AFTER DECK
4 only 250 m. × Ø80 mm. Polypropelene
2 only 250 m. × Ø80 mm. Poly. Spare
Dimensions of Mooring lines in millimetres


CARNARVON
CAPE CUVIER
MOORING LINES – 6×6 DRUM WINCH VESSEL
3
4
1
6
2
5
Ø80 Polyline
FORECASTLE DECK
AFTER DECK
50m × Ø80 Polyline Tails
Ø36 Wire
VESSEL LINES REQUIRED
FORE DECK
4 only 250 m. × Ø80 mm. Polypropelene
2 only 250 m. × Ø80 mm. Poly. Spare
AFTER DECK
4 only 250 m. × Ø80 mm. Polypropelene
2 only 250 m. × Ø80 mm. Poly. Spare
Dimensions of Mooring lines in millimetres


2 × 50 m. Ø80 Polyline Tails
2 × Ø36 Steel Wires
V/L Bearing 270°
2 × Ø36 Steel Wires
2 × 50 m. Ø80 Polyline Tails
2 × Ø80 Polylines
Breasting Line size shown for vessels with minimum Drum Winch configuration of 4 Winches Fore and 4 Winches Aft
Jetty Bearing 032°
Extreme Forward Loading
Extreme Aft Loading
Loading Positions – 75,000 d.w.t. Vessel
Loading Positions – 35,000 d.w.t. Vessel
CARNARVON
CAPE CUVIER
Dimensions of Mooring lines in millimetres

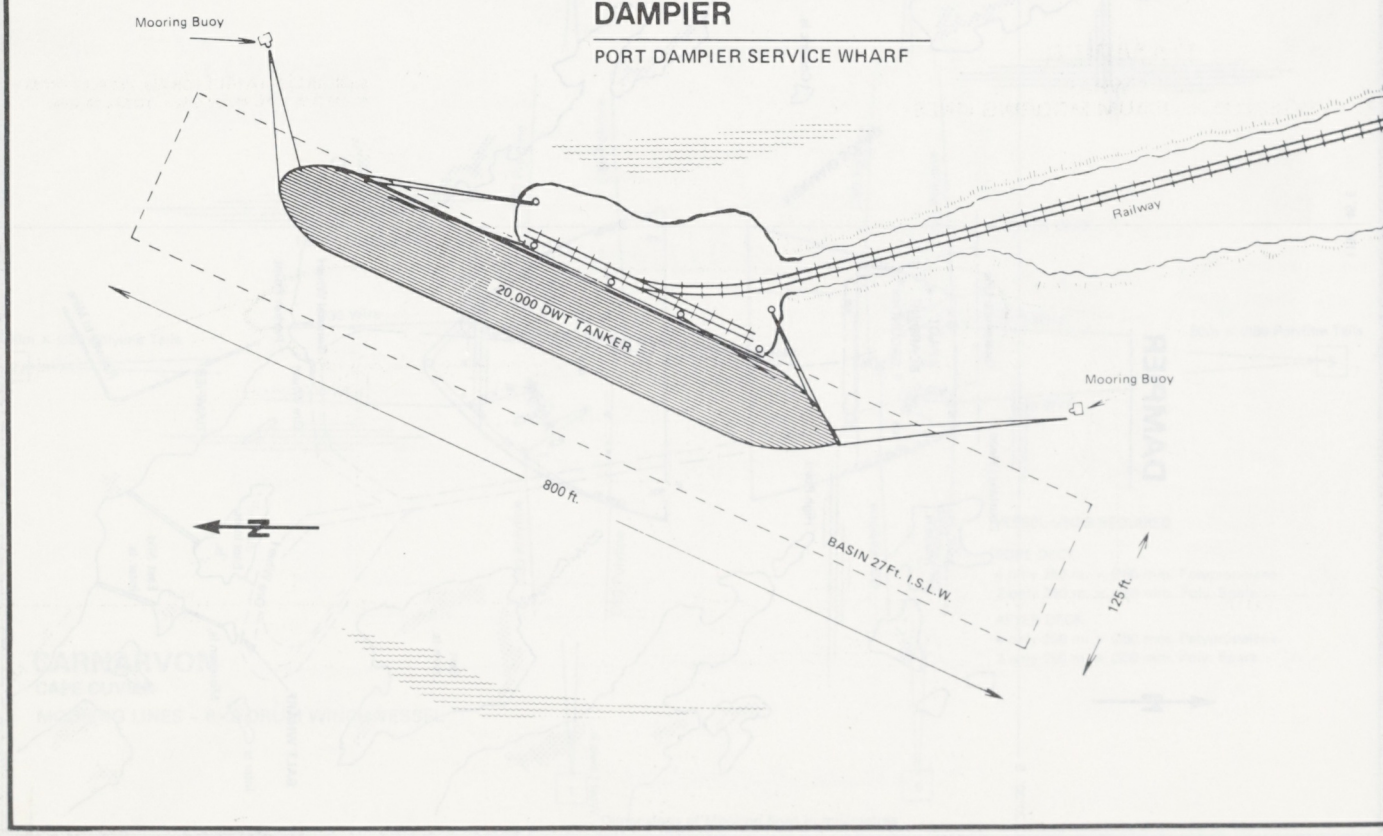

DAMPIER
116° 45' E
20° 30' S
N
MERMAID SOUND
Conzinc Is.
Quarantine Line
PILOT BOARDING GROUND
Piloted Approach to Ore & General Cargo Berths
General Wharf
Parker Point
Ore Wharf
DAMPIER
Railway to Mine
Courtenay Head
Malus Is.
High Point
East Inter. Is.
East Mid Inter. Is.
Ore Wharf
East Lewis Is.
Mistaken Is.
SALT WHARF
Inter Is.
West Lewis Is.

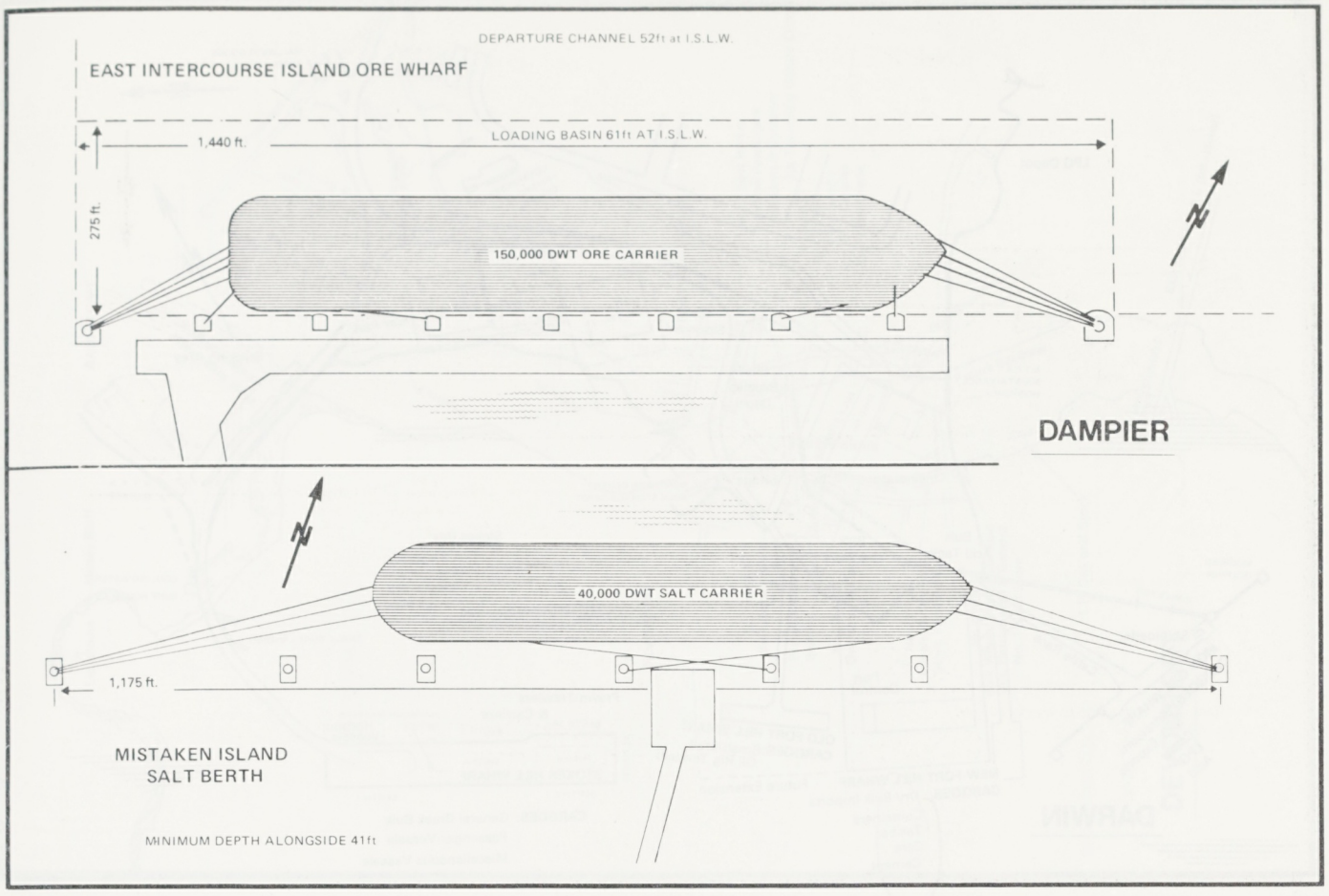
DAMPIER

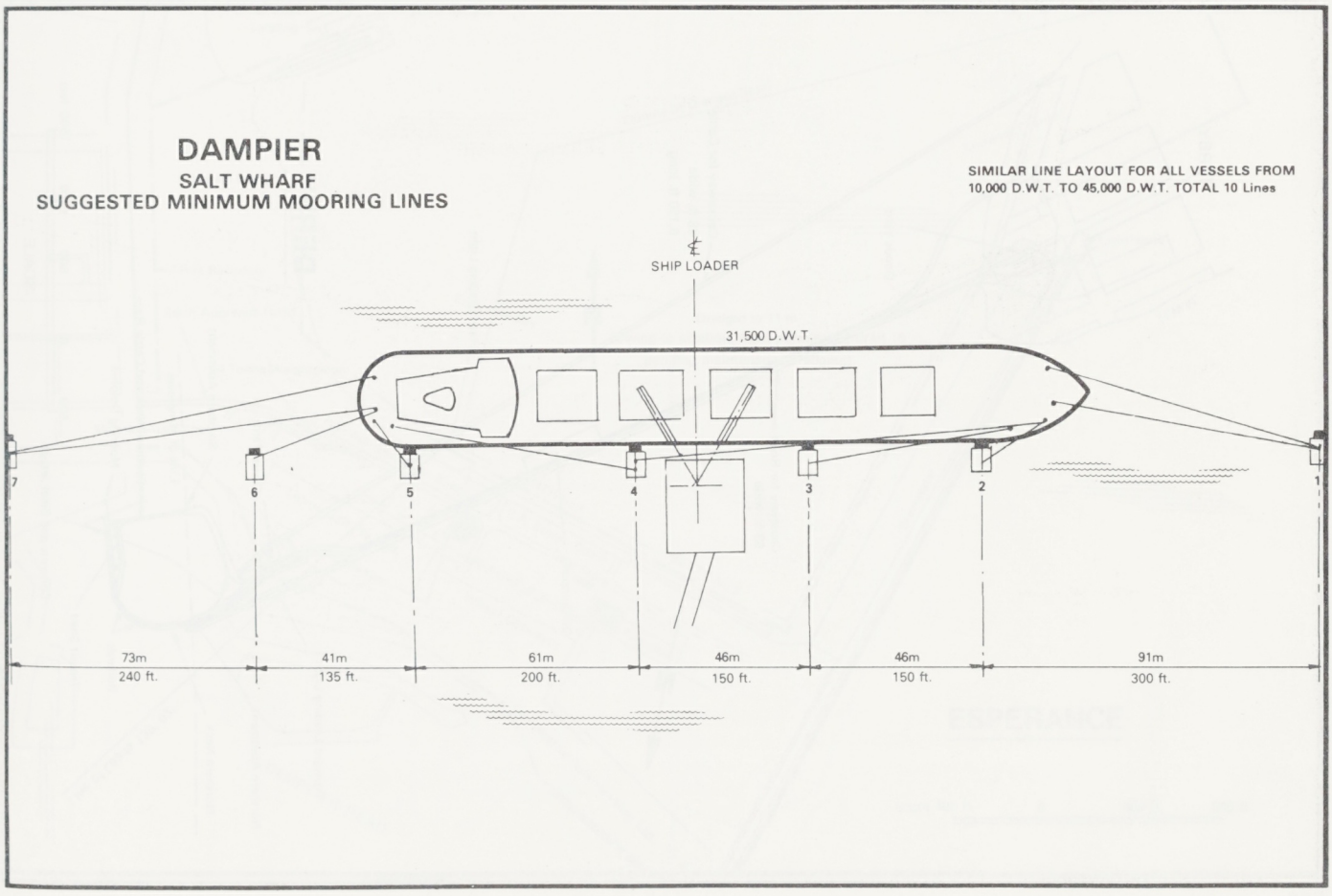


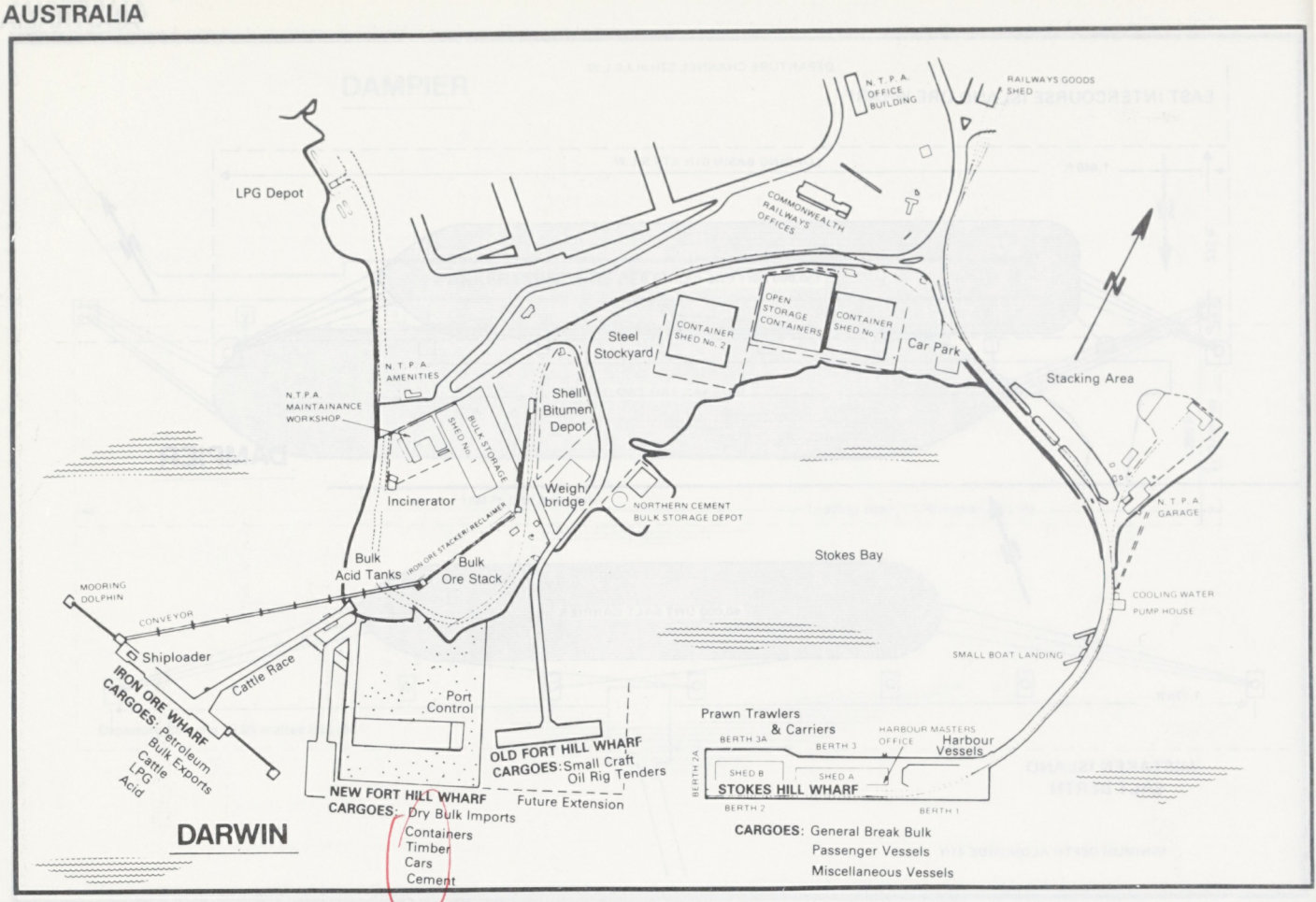
DAMPIER

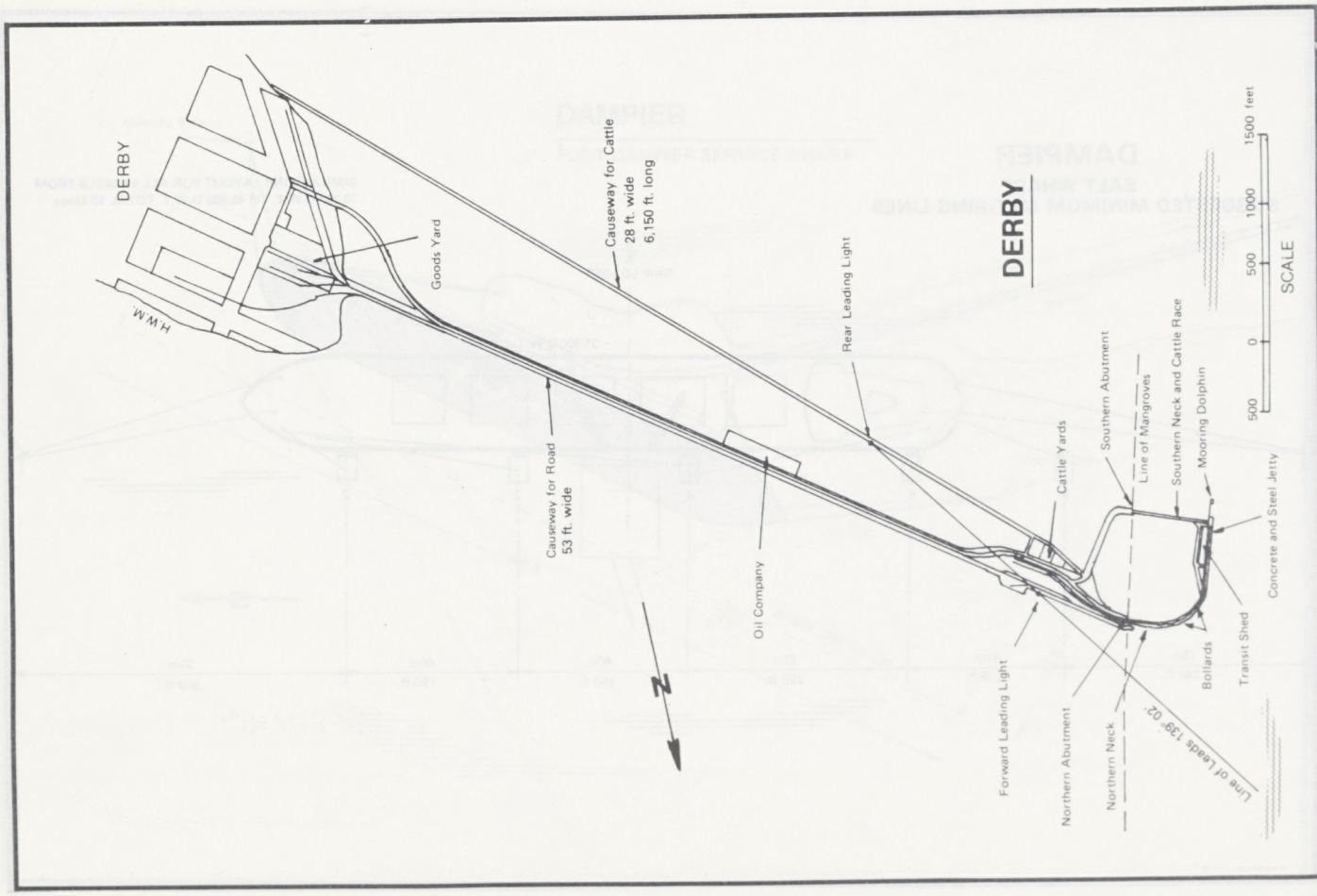
PORT DAMPIER SERVICE WHARF

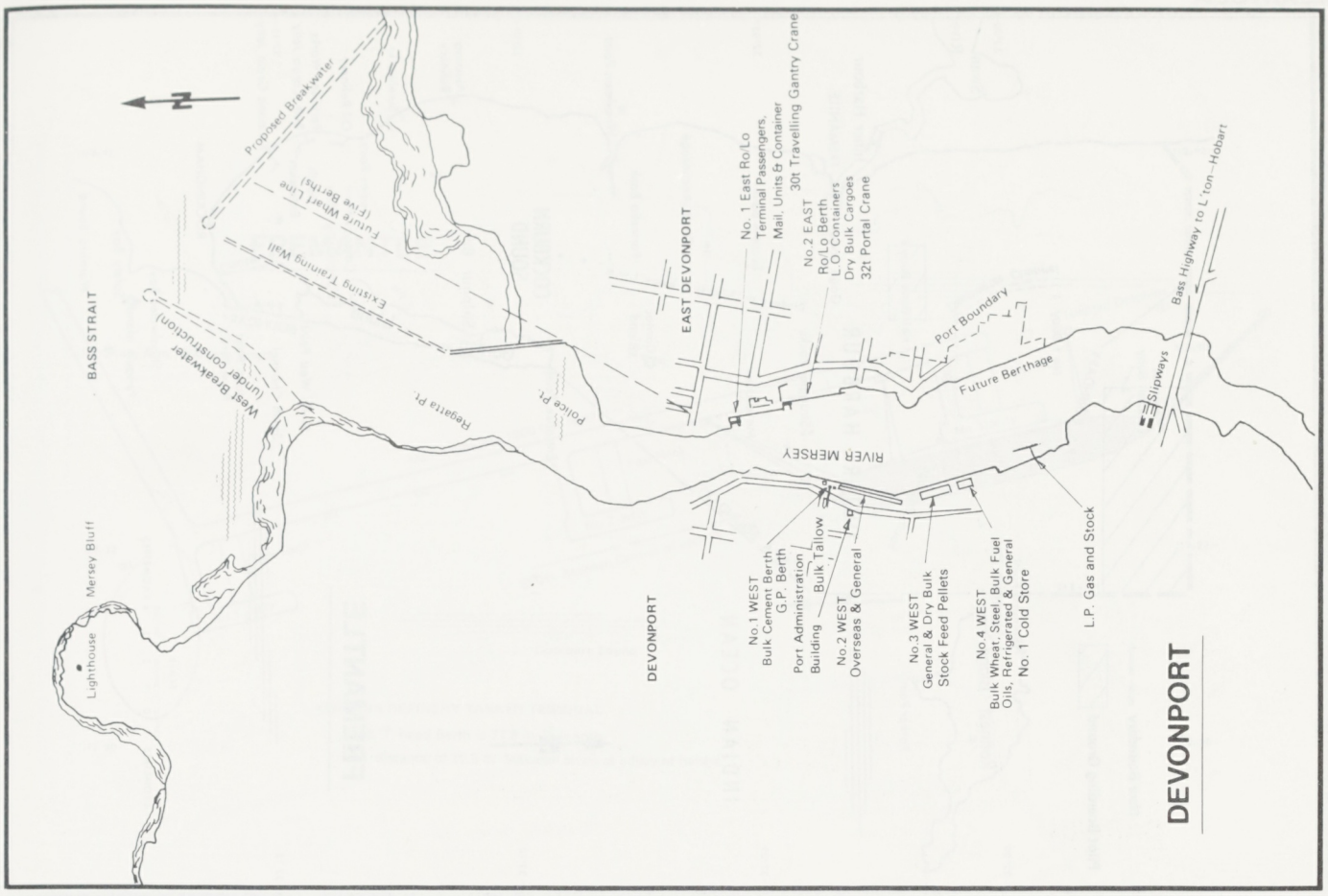


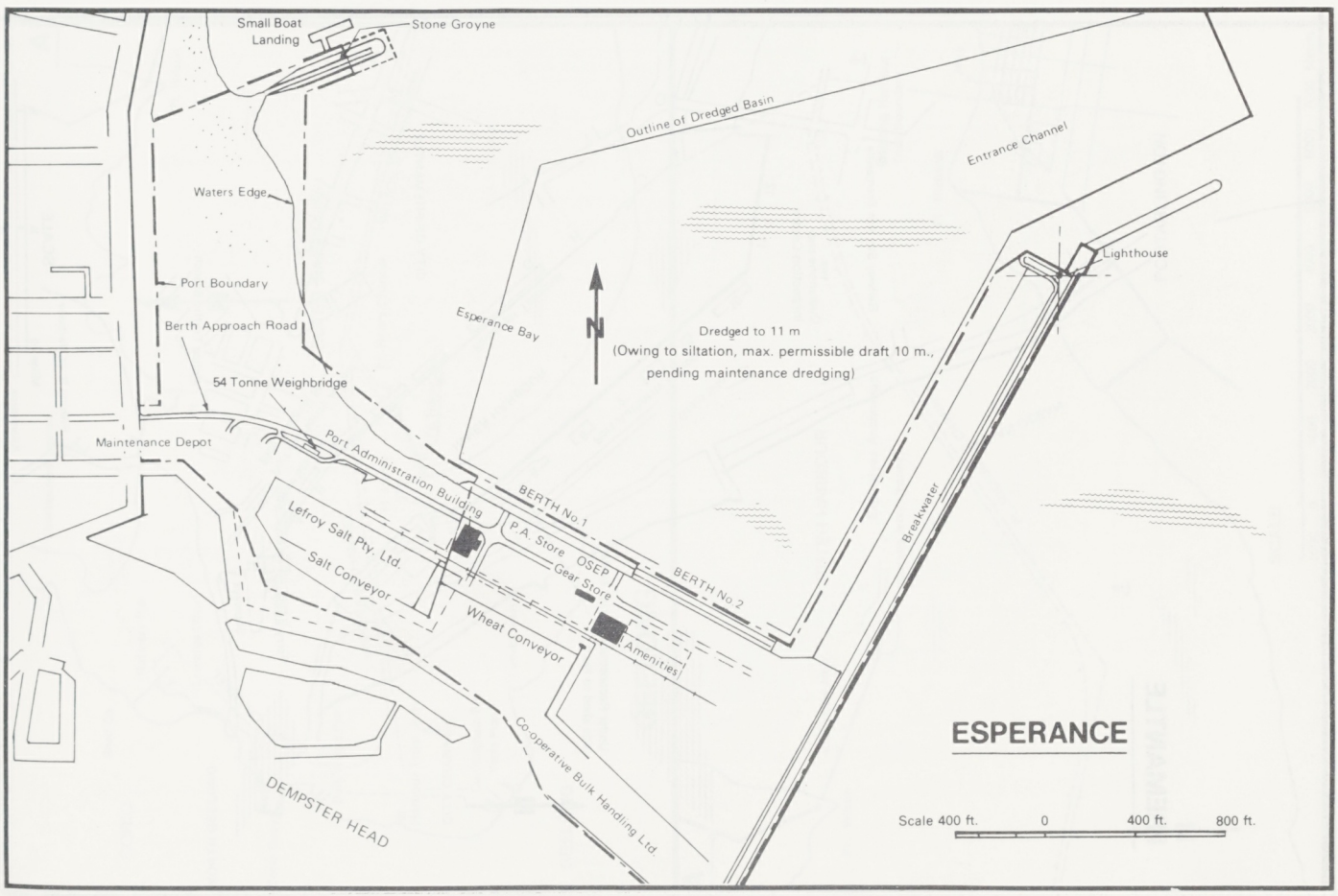

DEPARTURE CHANNEL 52ft at I.S.L.W.
EAST INTERCOURSE ISLAND ORE WHARF
1,440 ft.
LOADING BASIN 61ft AT I.S.L.W.
275 ft.
150,000 DWT ORE CARRIER
DAMPIER
40,000 DWT SALT CARRIER
1,175 ft.
MISTAKEN ISLAND
SALT BERTH
MINIMUM DEPTH ALONGSIDE 41ft

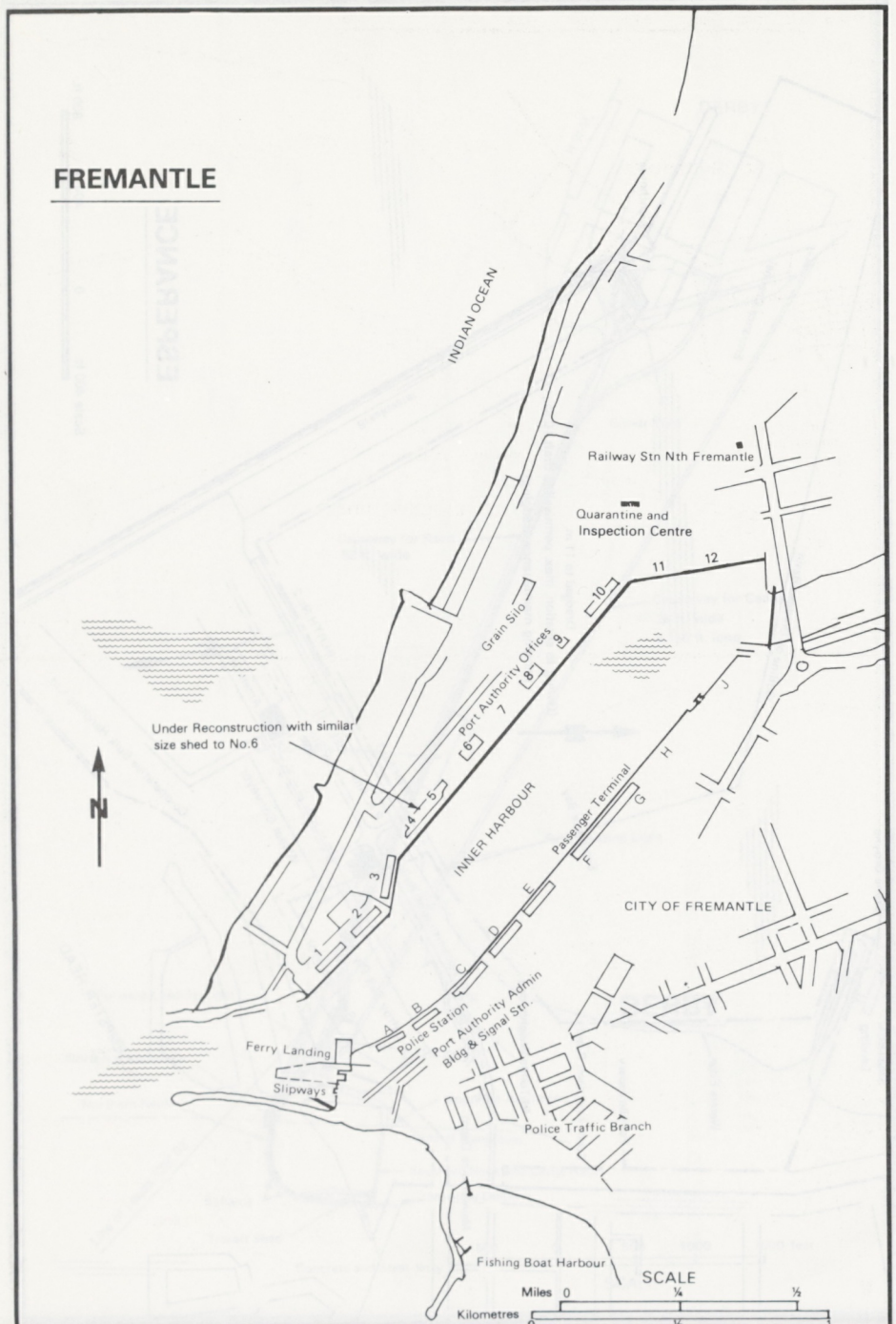

DAMPIER
SALT WHARF
SUGGESTED MINIMUM MOORING LINES
SIMILAR LINE LAYOUT FOR ALL VESSELS FROM
10,000 D.W.T. TO 45,000 D.W.T. TOTAL 10 Lines
SHIP LOADER
31,500 D.W.T.
7
6
5
4
3
2
1
73m
240 ft.
41m
135 ft.
61m
200 ft.
46m
150 ft.
46m
150 ft.
91m
300 ft.

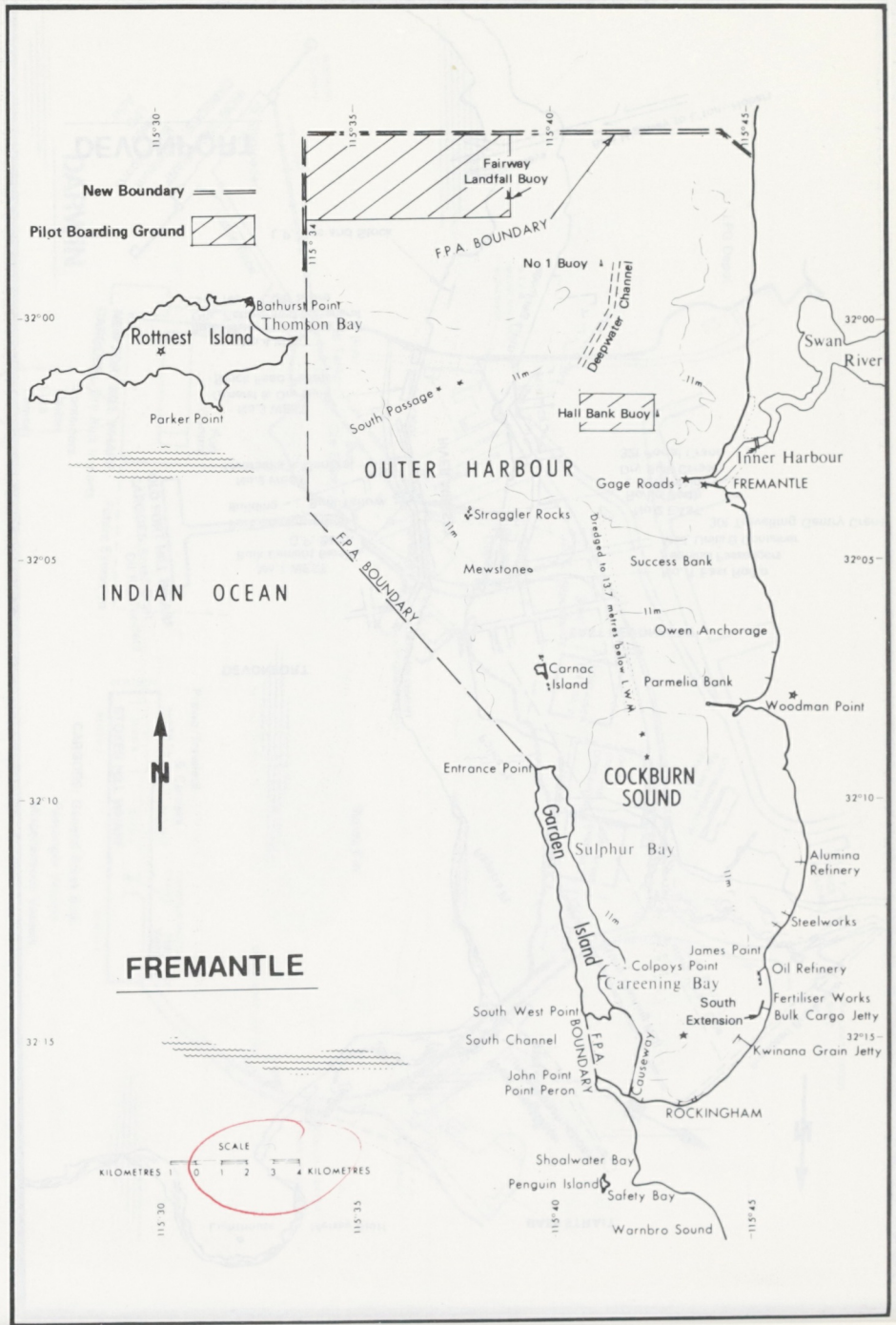

N.T.P.A. OFFICE BUILDING
RAILWAYS GOODS SHED
LPG Depot
COMMONWEALTH RAILWAYS OFFICES
OPEN STORAGE CONTAINERS
CONTAINER SHED No. 2
CONTAINER SHED No. 1
Steel Stockyard
Car Park
Stacking Area
N.T.P.A. AMENITIES
N.T.P.A. MAINTAINANCE WORKSHOP
BULK STORAGE SHED No. 1
Shell Bitumen Depot
Incinerator
Weigh bridge
NORTHERN CEMENT BULK STORAGE DEPOT
N.T.P.A. GARAGE
Stokes Bay
Bulk Acid Tanks
IRON ORE STACKER/ RECLAIMER
Bulk Ore Stack
MOORING DOLPHIN
CONVEYOR
COOLING WATER PUMP HOUSE
Shiploader
Cattle Race
SMALL BOAT LANDING
Port Control
IRON ORE WHARF
CARGOES: Petroleum
Bulk Exports
Cattle
LPG
Acid
OLD FORT HILL WHARF
CARGOES: Small Craft
Oil Rig Tenders
Prawn Trawlers & Carriers
HARBOUR MASTERS OFFICE
BERTH 3A
BERTH 3
Harbour Vessels
BERTH 2A
SHED B
SHED A
STOKES HILL WHARF
BERTH 2
BERTH 1
NEW FORT HILL WHARF
CARGOES: Dry Bulk Imports
Containers
Timber
Cars
Cement
Future Extension
DARWIN
CARGOES: General Break Bulk
Passenger Vessels
Miscellaneous Vessels

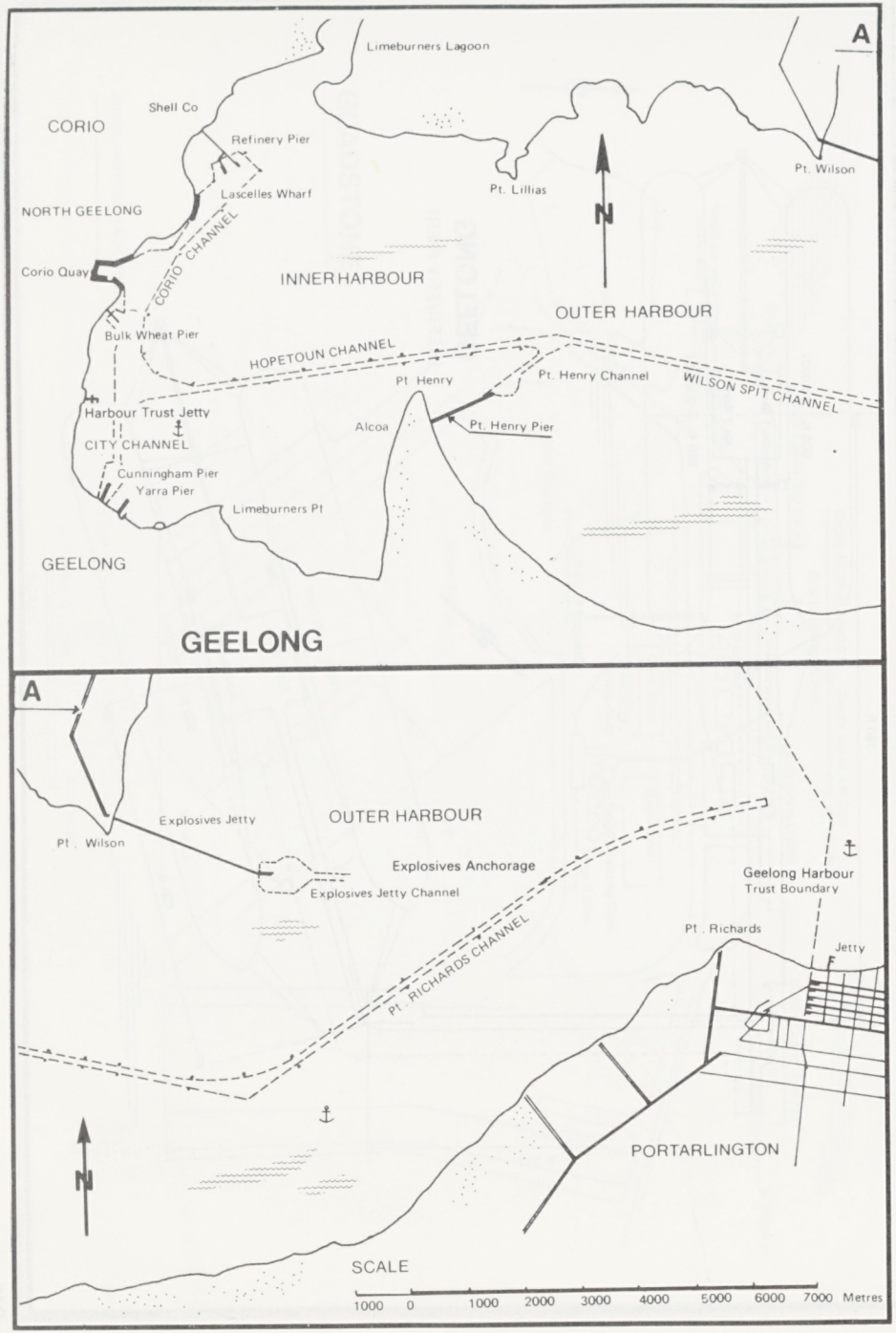

DERBY
H.W.M.
Goods Yard
Causeway for Cattle
28 ft. wide
6,150 ft. long
Causeway for Road
53 ft. wide
Rear Leading Light
DERBY
Oil Company
Cattle Yards
Southern Abutment
Line of Mangroves
Southern Neck and Cattle Race
Mooring Dolphin
Concrete and Steel Jetty
Bollards
Transit Shed
Forward Leading Light
Northern Abutment
Northern Neck
Line of Leads 139° 02'
SCALE
1500 feet
1000
500
0
500

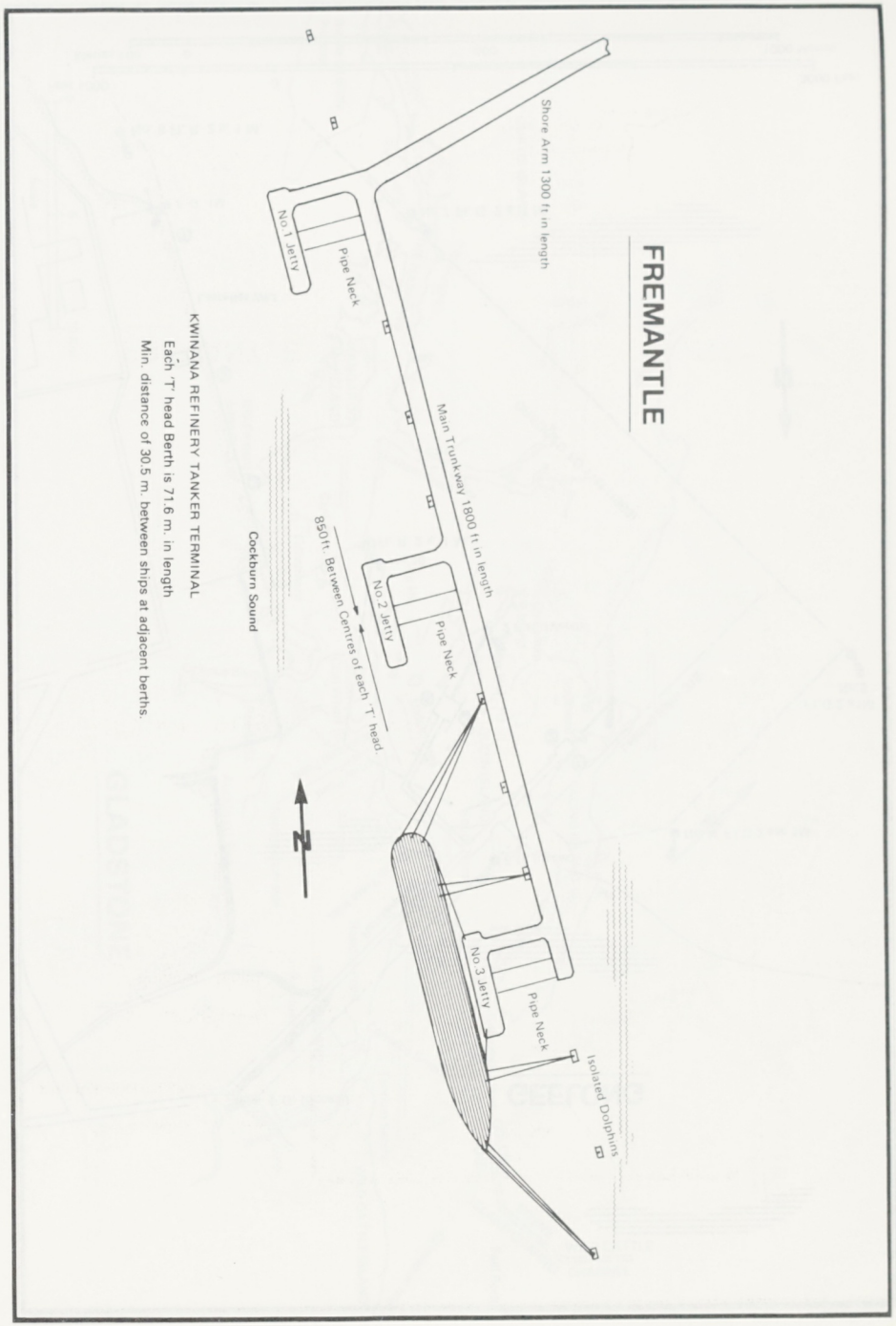

N
Proposed Breakwater
Future Wharf Line (Five Berths)
Existing Training Wall
BASS STRAIT
West Breakwater (under construction)
Regatta Pt
Police Pt
EAST DEVONPORT
No. 1 East Ro/Lo Terminal Passengers, Mail, Units & Container 30t Travelling Gantry Crane
No.2 EAST Ro/Lo Berth L/O Containers Dry Bulk Cargoes 32t Portal Crane
Port Boundary
Future Berthage
Bass Highway to L'ton—Hobart
Slipways
RIVER MERSEY
Mersey Bluff
Lighthouse
DEVONPORT
No.1 WEST Bulk Cement Berth G.P. Berth
Port Administration Building
Bulk Tallow
No.2 WEST Overseas & General
No.3 WEST General & Dry Bulk Stock Feed Pellets
No.4 WEST Bulk Wheat, Steel, Bulk Fuel Oils, Refrigerated & General No. 1 Cold Store
L.P. Gas and Stock
DEVONPORT


Small Boat Landing
Stone Groyne
Outline of Dredged Basin
Entrance Channel
Waters Edge
Port Boundary
Berth Approach Road
54 Tonne Weighbridge
Maintenance Depot
Esperance Bay
N
Dredged to 11 m
(Owing to siltation, max. permissible draft 10 m., pending maintenance dredging)
Lighthouse
Port Administration Building
BERTH No.1
BERTH No.2
P.A. Store
OSEP
Gear Store
Amenities
Lefroy Salt Pty. Ltd.
Salt Conveyor
Wheat Conveyor
Co-operative Bulk Handing Ltd.
Breakwater
DEMPSTER HEAD
ESPERANCE
Scale 400 ft. 0 400 ft. 800 ft.

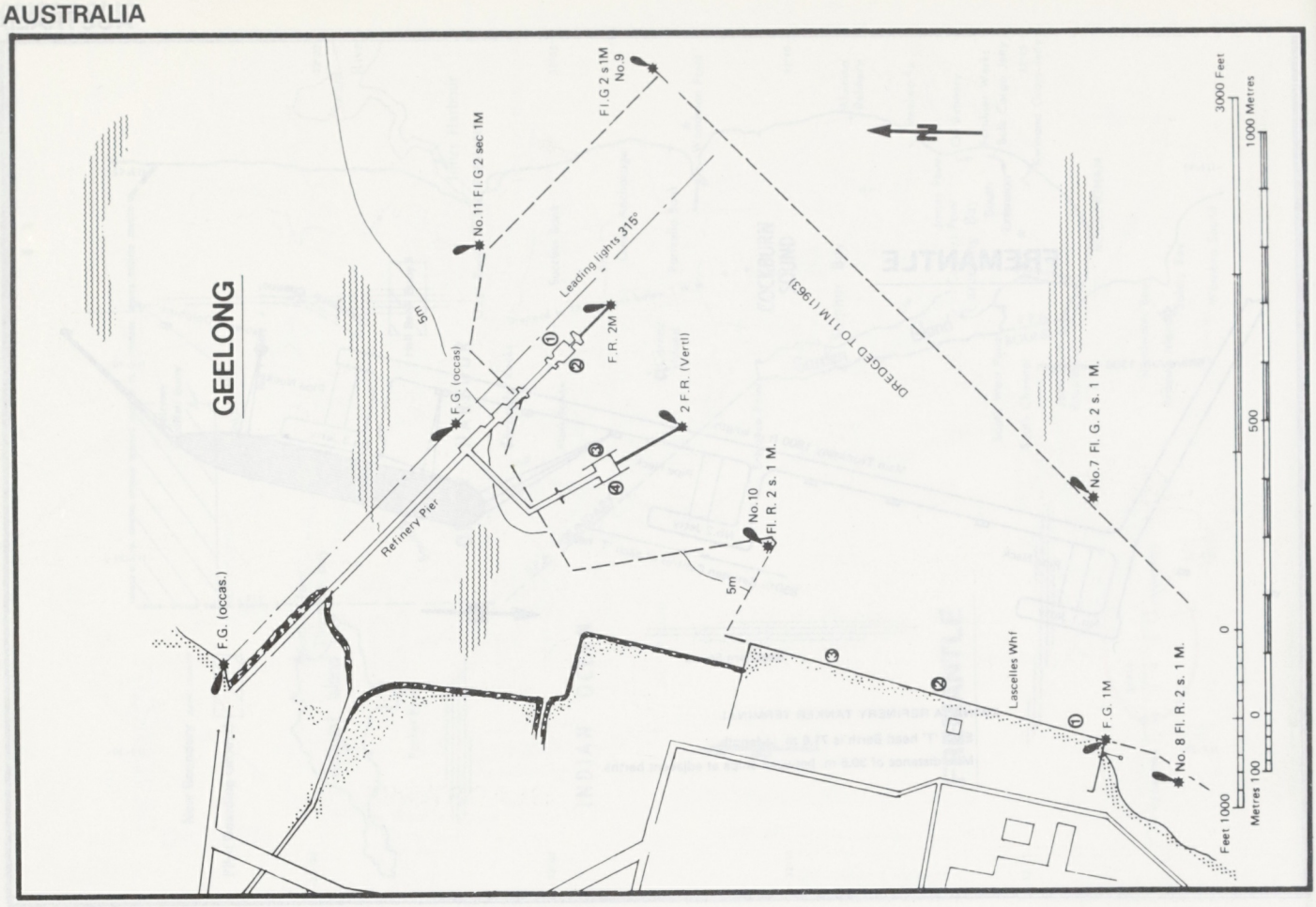

FREMANTLE
INDIAN OCEAN
Railway Stn Nth Fremantle
Quarantine and Inspection Centre
Grain Silo
Port Authority Offices
Under Reconstruction with similar size shed to No.6
INNER HARBOUR
Passenger Terminal
CITY OF FREMANTLE
Ferry Landing
Slipways
Police Station
Port Authority Admin Bldg & Signal Stn.
Police Traffic Branch
Fishing Boat Harbour
SCALE
Miles 0 ¼ ½
Kilometres

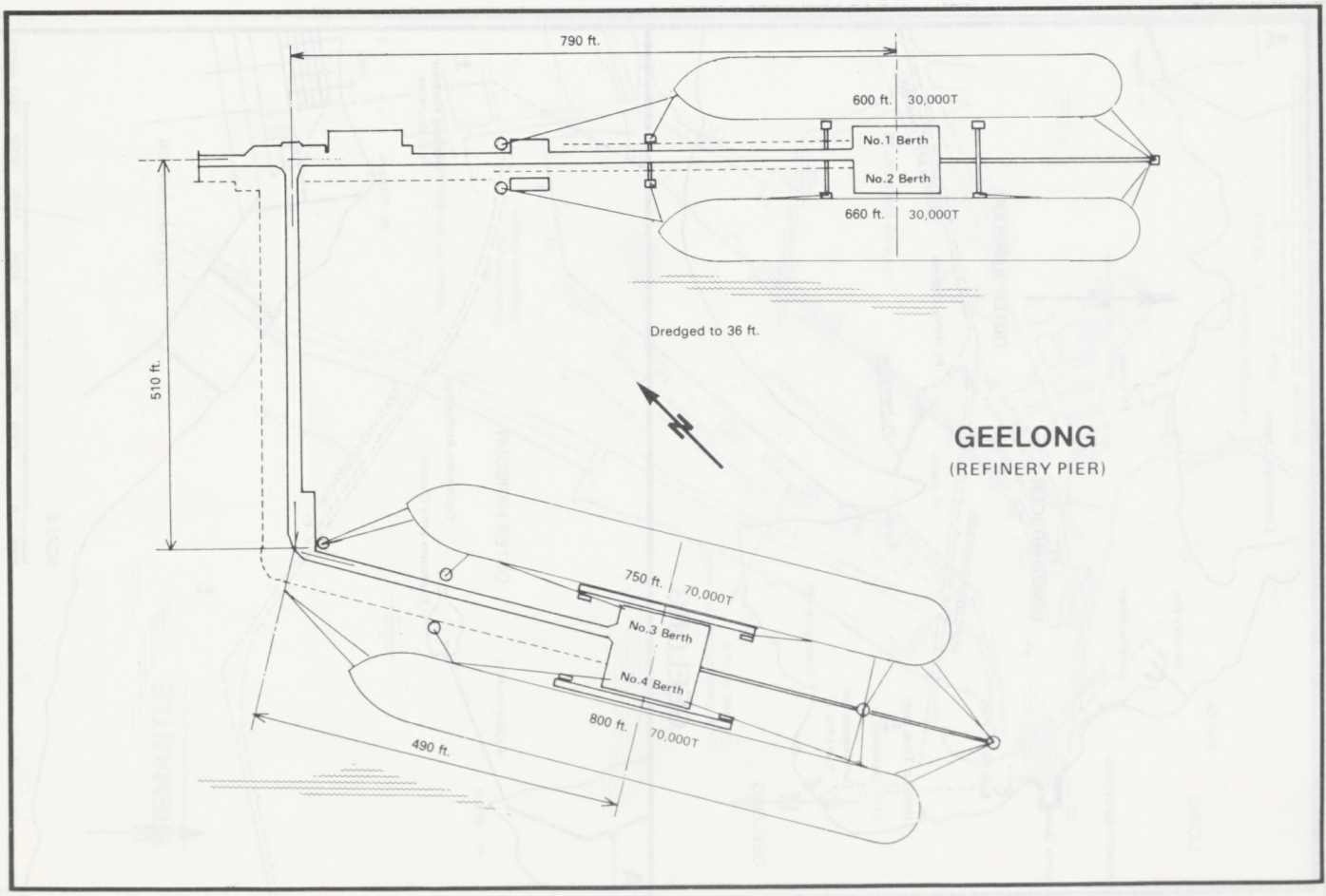

New Boundary
Pilot Boarding Ground
Fairway Landfall Buoy
FPA BOUNDARY
No 1 Buoy
Deepwater Channel
Bathurst Point
Thomson Bay
Rottnest Island
Parker Point
South Passage
Hall Bank Buoy
Swan River
OUTER HARBOUR
Inner Harbour
Gage Roads
FREMANTLE
Straggler Rocks
Dredged to 13.7 metres below L.W.
Mewstones
Success Bank
INDIAN OCEAN
Owen Anchorage
Carnac Island
Parmelia Bank
Woodman Point
Entrance Point
COCKBURN SOUND
Garden Island
Sulphur Bay
Alumina Refinery
Steelworks
James Point
Colpoys Point
Careening Bay
Oil Refinery
South West Point
South Channel
South Extension
Fertiliser Works
Bulk Cargo Jetty
Kwinana Grain Jetty
John Point
Point Peron
Causeway
ROCKINGHAM
Shoalwater Bay
Penguin Island
Safety Bay
Warnbro Sound
SCALE
KILOMETRES 1 0 1 2 3 4 KILOMETRES

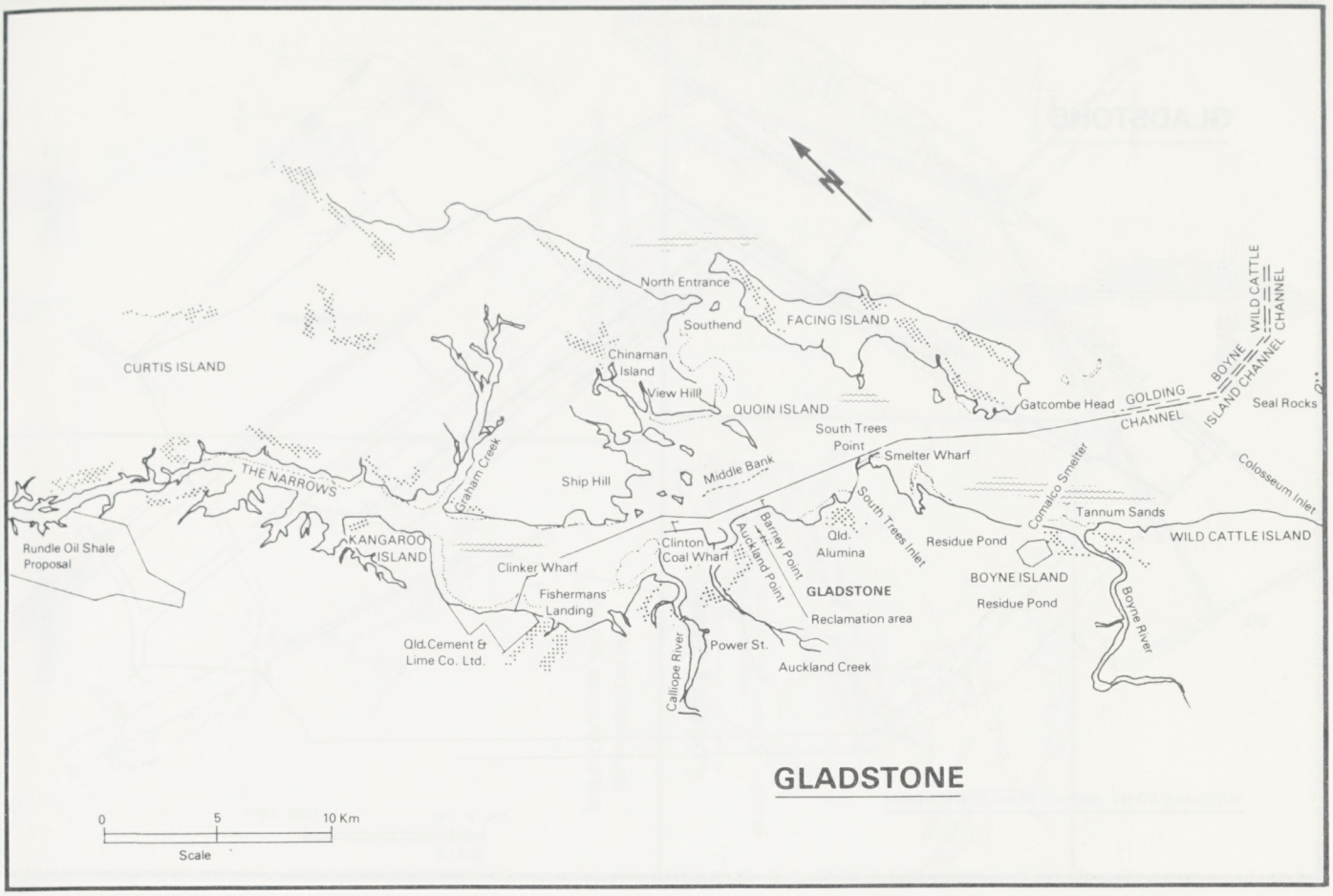

GEELONG
A
Limeburners Lagoon
CORIO
Shell Co
Refinery Pier
Lascelles Wharf
NORTH GEELONG
Corio Quay
CORIO CHANNEL
INNER HARBOUR
OUTER HARBOUR
Pt. Lillias
Pt. Wilson
N
Bulk Wheat Pier
HOPETOUN CHANNEL
Pt. Henry
Pt. Henry Channel
WILSON SPIT CHANNEL
Harbour Trust Jetty
CITY CHANNEL
Alcoa
Pt. Henry Pier
Cunningham Pier
Yarra Pier
Limeburners Pt
GEELONG
A
Explosives Jetty
OUTER HARBOUR
Pt. Wilson
Explosives Anchorage
Explosives Jetty Channel
Geelong Harbour
Trust Boundary
Pt. Richards
Jetty
PT. RICHARDS CHANNEL
N
PORTARLINGTON
SCALE
1000 0 1000 2000 3000 4000 5000 6000 7000 Metres

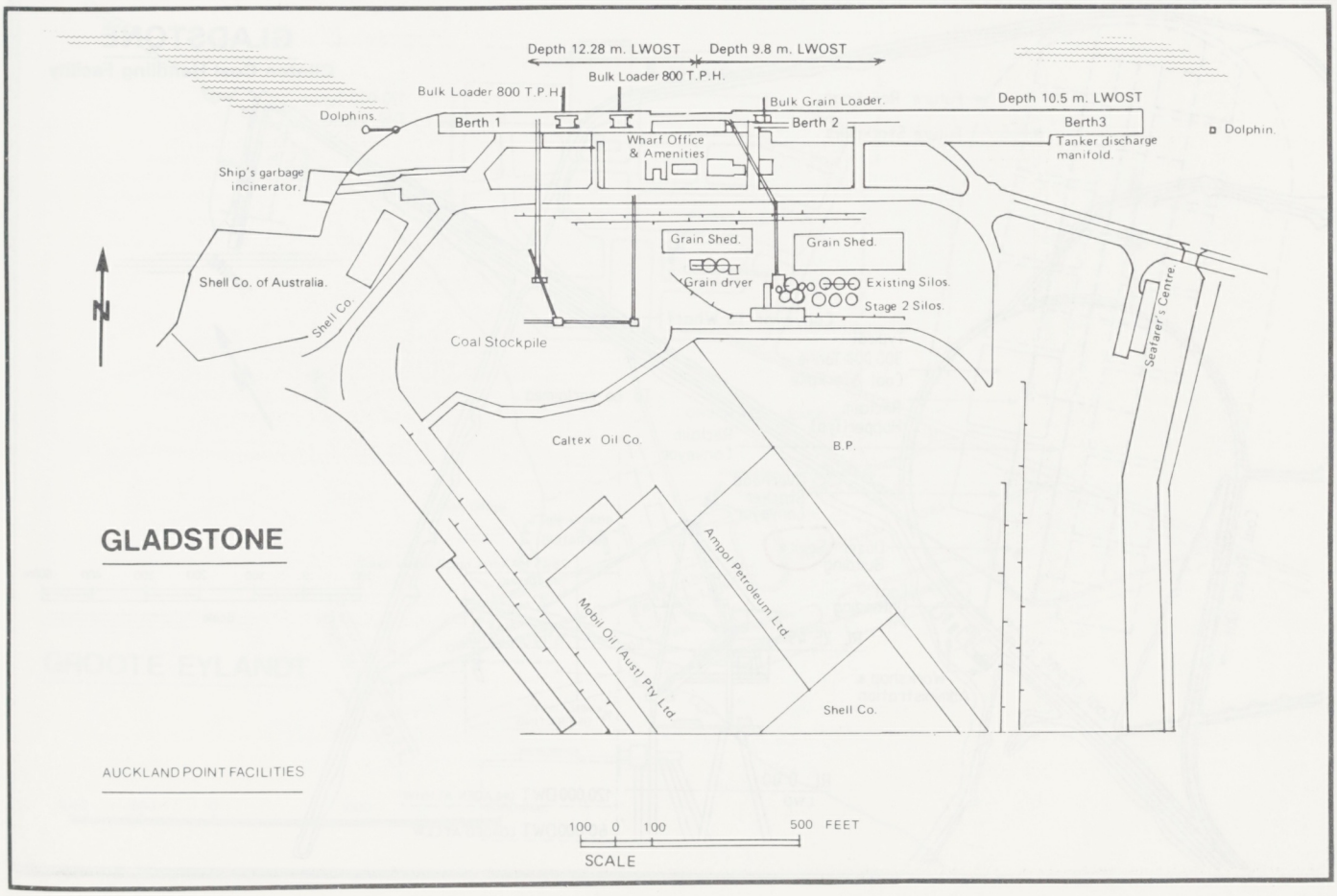

FREMANTLE
Shore Arm 1300 ft in length
No.1 Jetty
Pipe Neck
Main Trunkway 1800 ft in length
Cockburn Sound
No.2 Jetty
Pipe Neck
850 ft. Between Centres of each 'T' head
N
No.3 Jetty
Pipe Neck
Isolated Dolphins
KWINANA REFINERY TANKER TERMINAL
Each 'T' head Berth is 71.6 m. in length
Min. distance of 30.5 m. between ships at adjacent berths.

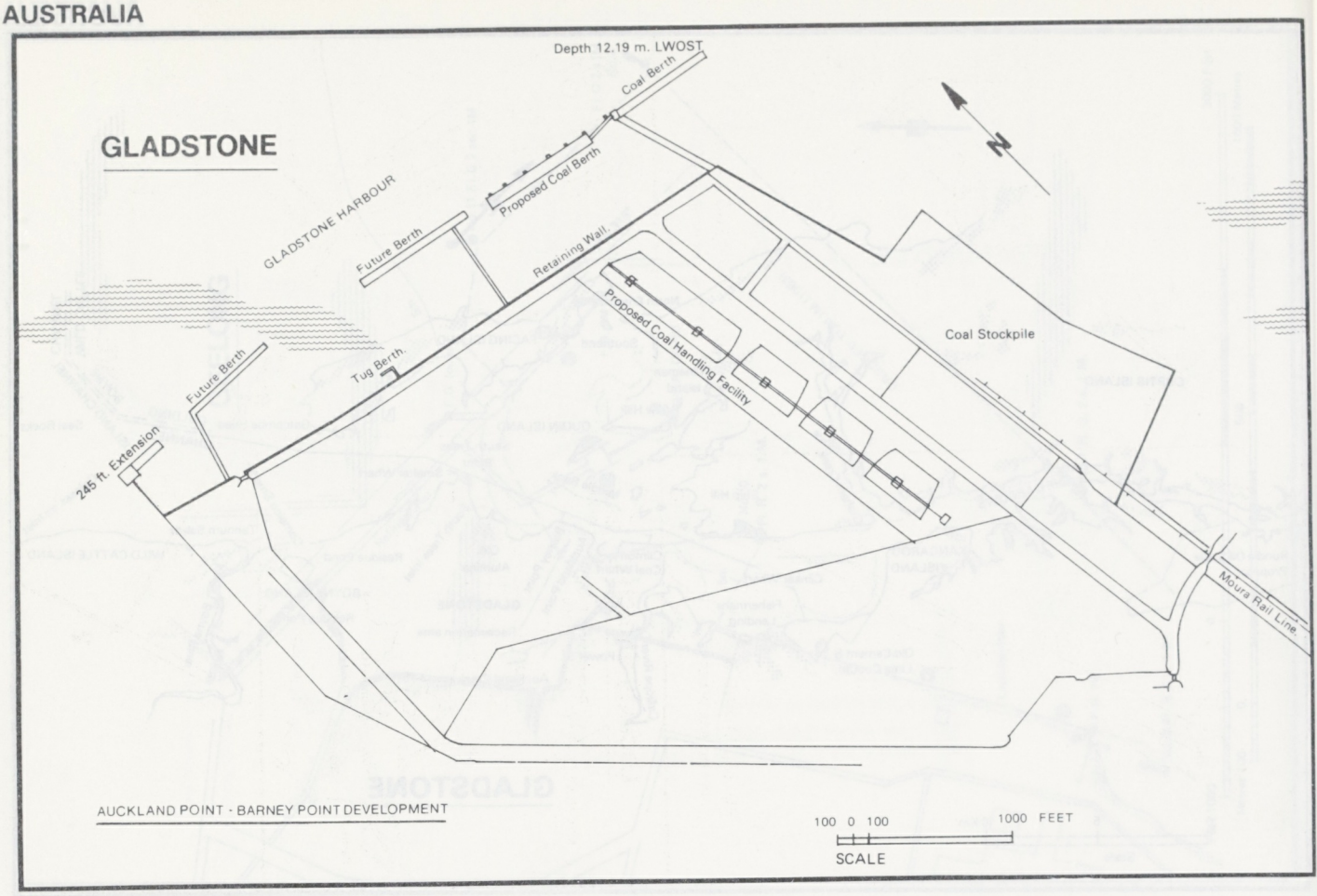
AUSTRALIA

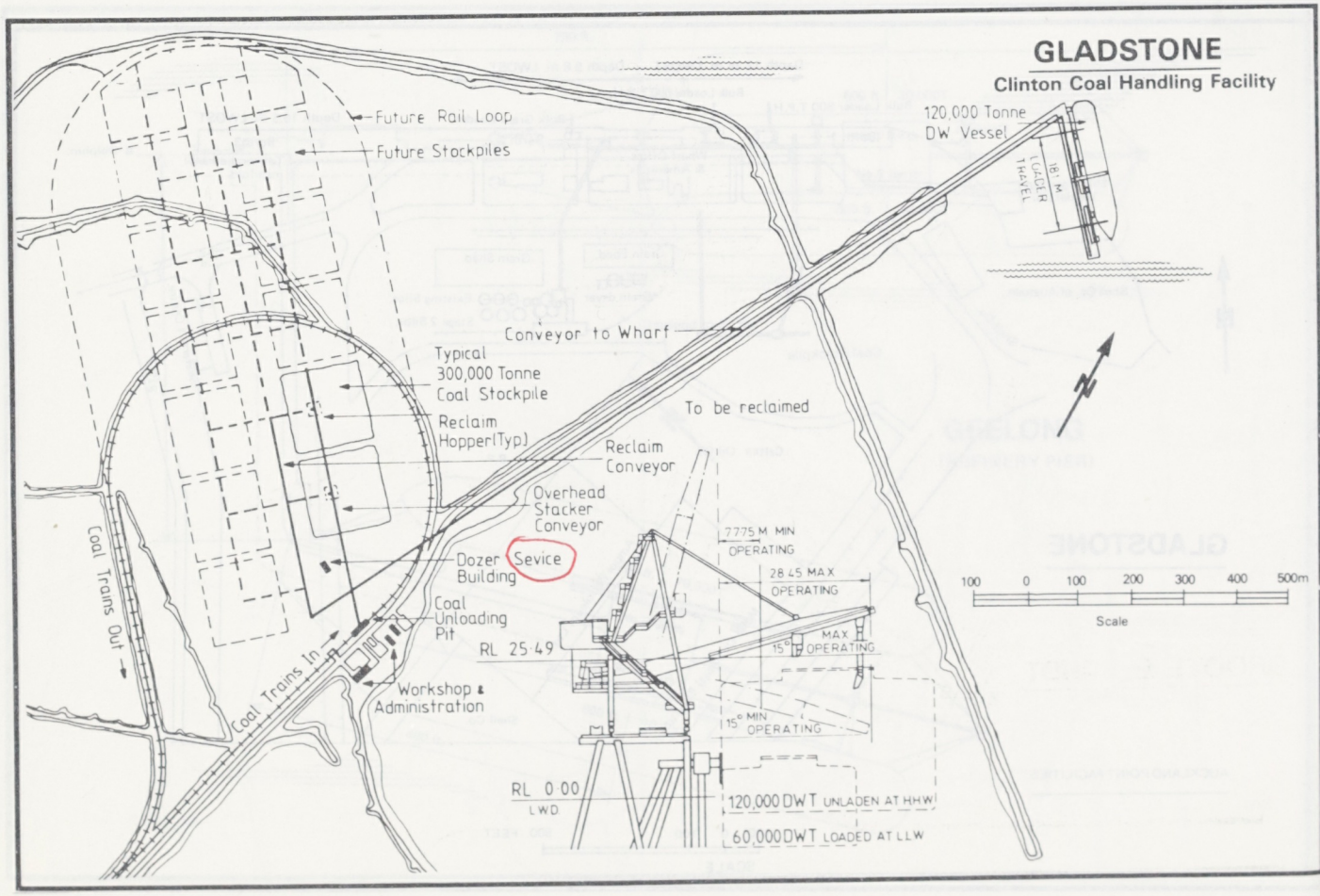

GEELONG
Fl.G 2 s 1M
No.9
No.11 Fl.G 2 sec 1M
Leading lights 315°
F.R. 2M
2 F.R. (Vertl)
F.G. (occas)
5m
DREDGED TO 11M (1963)
No.7 Fl. G. 2 s. 1 M.
No.10
Fl. R. 2 s. 1 M.
Refinery Pier
F.G. (occas.)
Lascelles Whf
F.G. 1M
No. 8 Fl. R. 2 s. 1 M.
3000 Feet
1000 Metres
500
0
Feet 1000
Metres 100

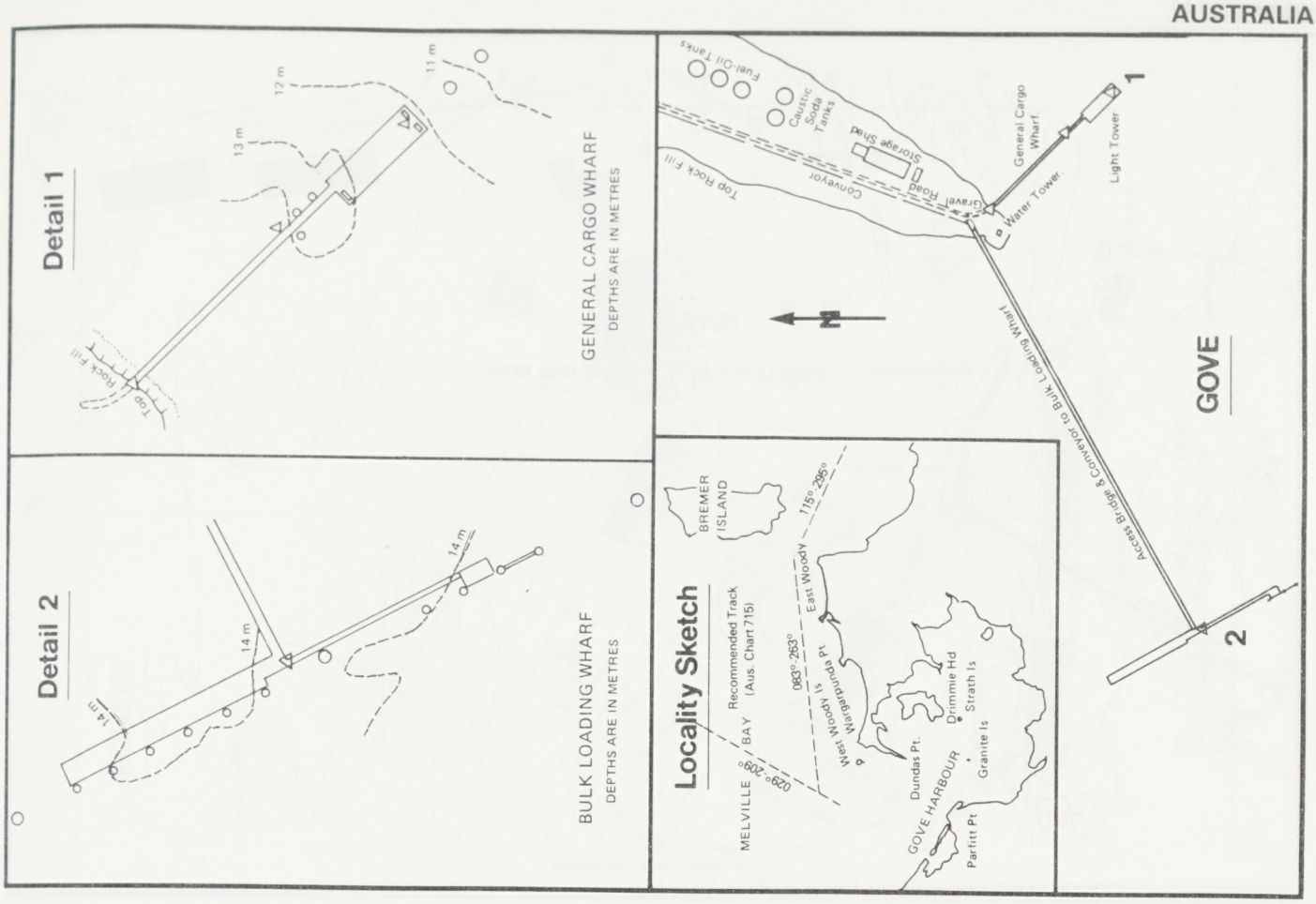

790 ft.
600 ft. 30,000T
No.1 Berth
No.2 Berth
660 ft. 30,000T
Dredged to 36 ft.
510 ft.
GEELONG
(REFINERY PIER)
750 ft. 70,000T
No.3 Berth
No.4 Berth
800 ft. 70,000T
490 ft.

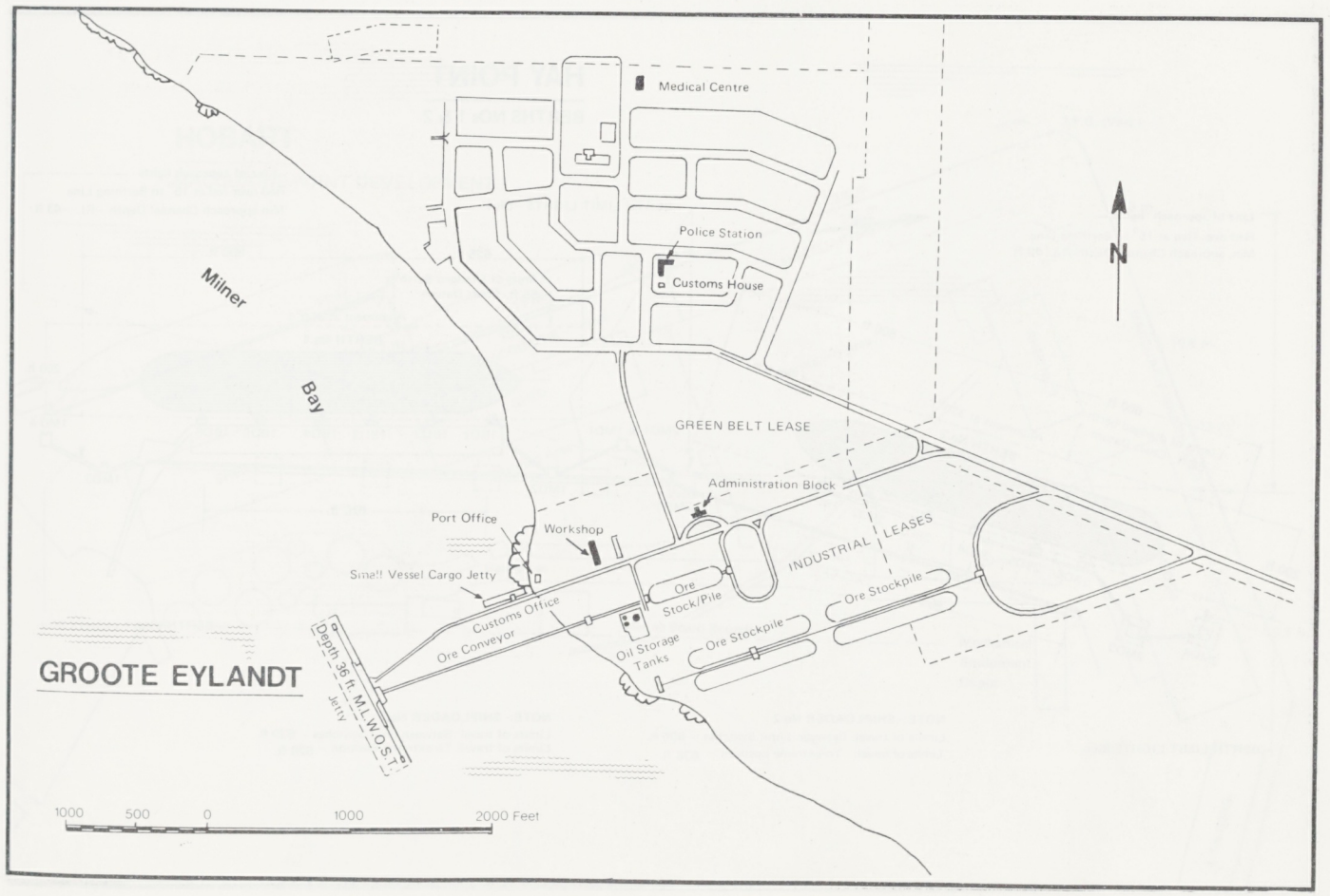

N
North Entrance
Southend
FACING ISLAND
CURTIS ISLAND
Chinaman Island
View Hill
QUOIN ISLAND
Gatcombe Head
GOLDING CHANNEL
BOYNE ISLAND CHANNEL
WILD CATTLE CHANNEL
Seal Rocks
South Trees Point
Smelter Wharf
Colosseum Inlet
Comalco Smelter
Tannum Sands
WILD CATTLE ISLAND
THE NARROWS
Graham Creek
Ship Hill
Middle Bank
Barney Point
Auckland Point
South Trees Inlet
Qld. Alumina
Residue Pond
BOYNE ISLAND
Residue Pond
Boyne River
Rundle Oil Shale Proposal
KANGAROO ISLAND
Clinker Wharf
Clinton Coal Wharf
Fishermans Landing
GLADSTONE
Reclamation area
Qld. Cement & Lime Co. Ltd.
Power St.
Auckland Creek
Calliope River
GLADSTONE
0 5 10 Km
Scale

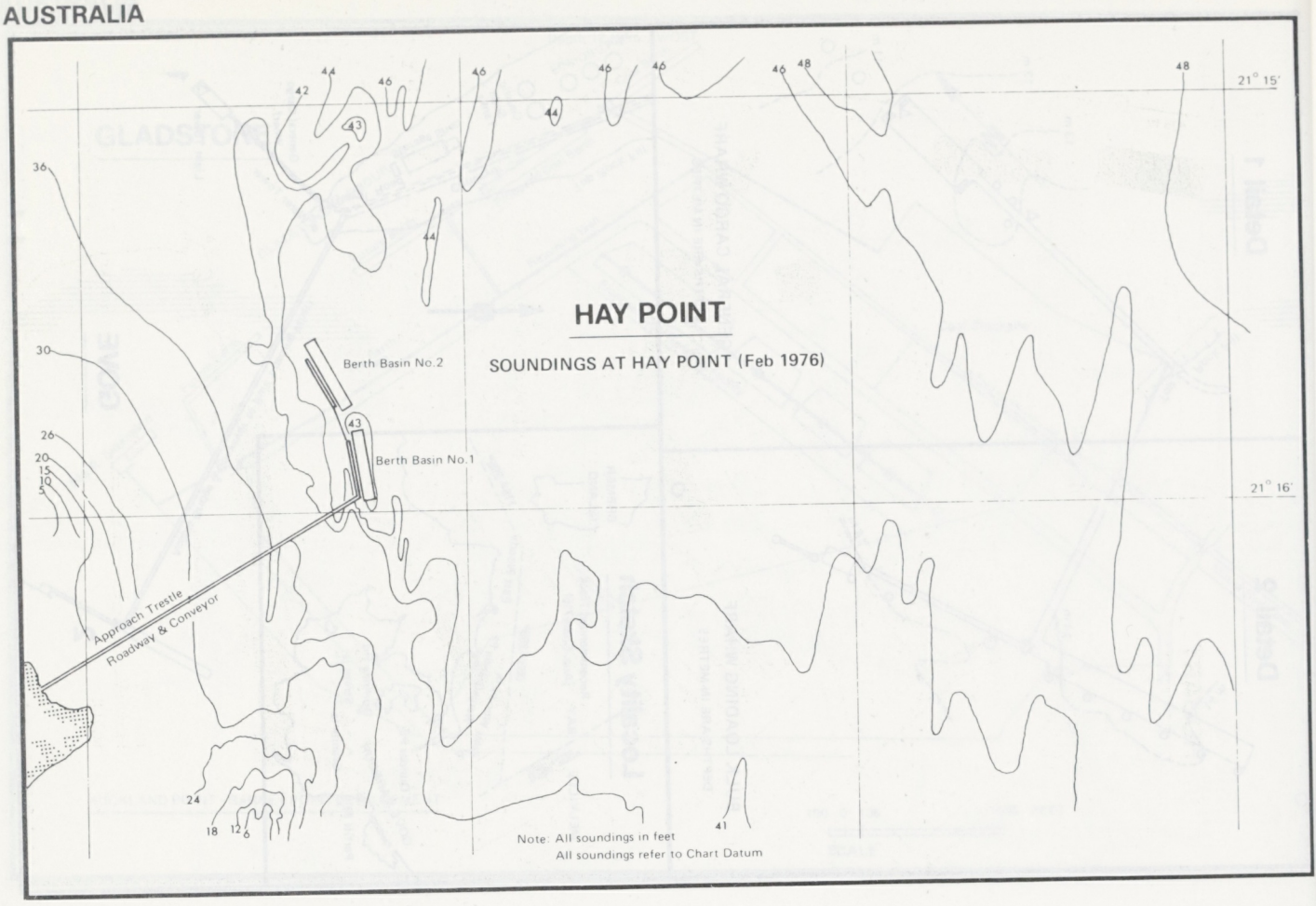

Depth 12.28 m. LWOST
Depth 9.8 m. LWOST
Bulk Loader 800 T.P.H.
Bulk Loader 800 T.P.H.
Bulk Grain Loader.
Depth 10.5 m. LWOST
Dolphins.
Berth 1
Berth 2
Berth3
Dolphin.
Wharf Office & Amenities
Tanker discharge manifold.
Ship's garbage incinerator.
Grain Shed.
Grain Shed.
Grain dryer
Existing Silos.
Stage 2 Silos.
N
Shell Co. of Australia.
Shell Co.
Coal Stockpile
Seafarer's Centre
Caltex Oil Co.
B.P.
Ampol Petroleum Ltd.
Mobil Oil (Aust) Pty Ltd.
Shell Co.
GLADSTONE
AUCKLAND POINT FACILITIES
100 0 100 500 FEET
SCALE

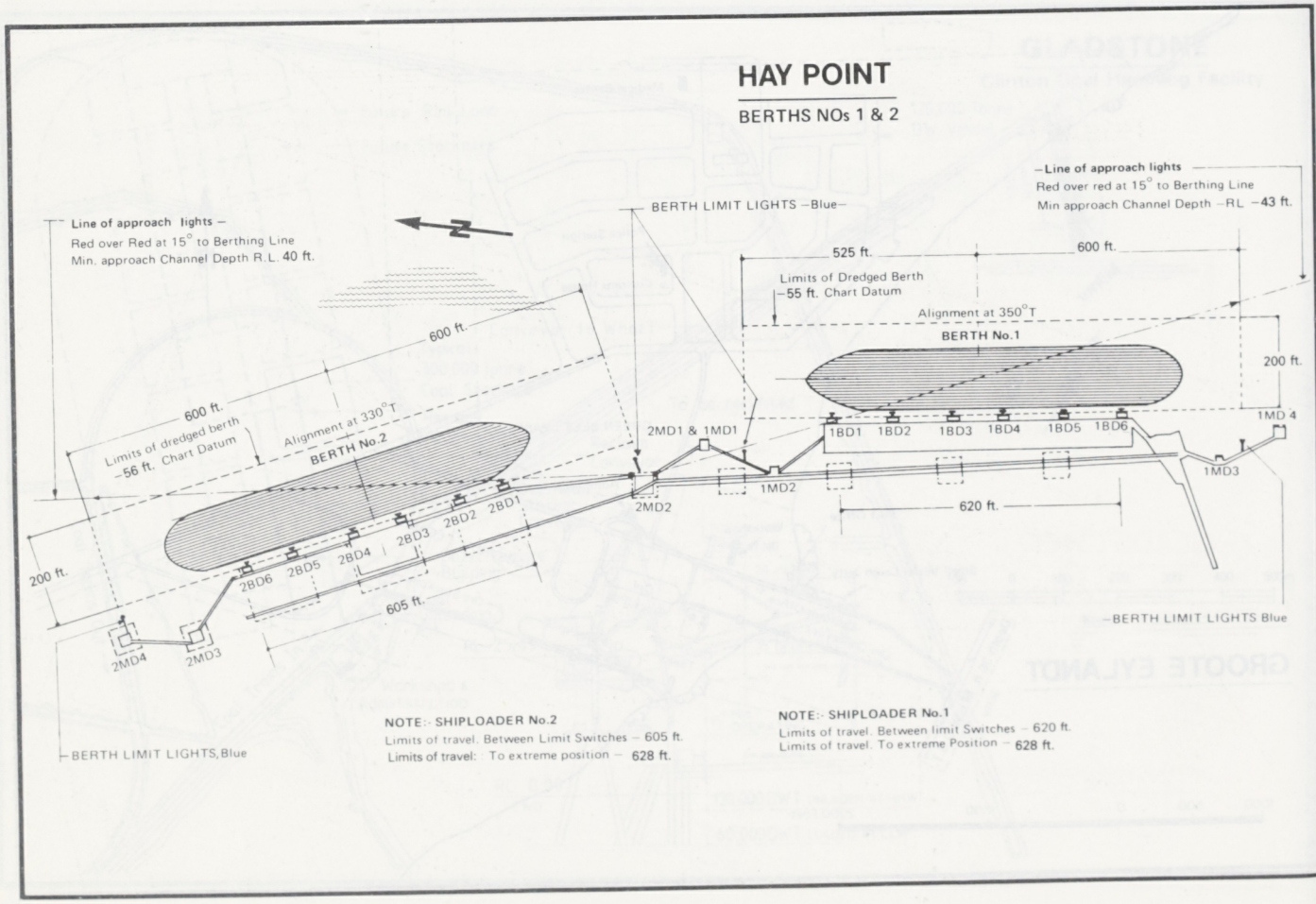

GLADSTONE
Depth 12.19 m. LWOST
Coal Berth
Proposed Coal Berth
GLADSTONE HARBOUR
Future Berth
Retaining Wall
Proposed Coal Handling Facility
Coal Stockpile
Future Berth
Tug Berth
245 ft. Extension
Moura Rail Line
N
AUCKLAND POINT - BARNEY POINT DEVELOPMENT
100 0 100 1000 FEET
SCALE

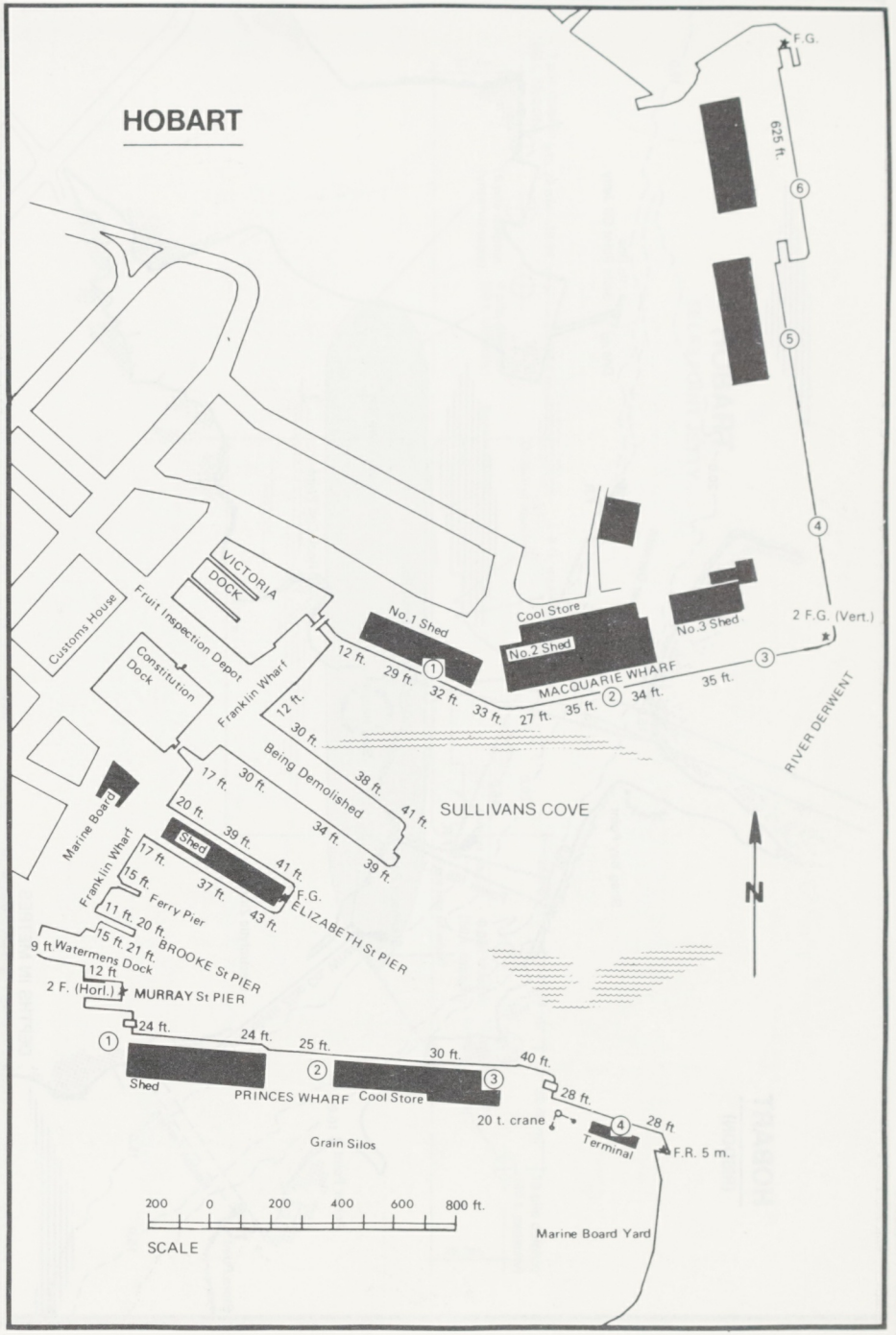

GLADSTONE
Clinton Coal Handling Facility
120,000 Tonne DW Vessel
18.1 M LOADED DRAFT
Future Rail Loop
Future Stockpiles
Conveyor to Wharf
Typical 300,000 Tonne Coal Stockpile
To be reclaimed
Reclaim Hopper(Typ)
Reclaim Conveyor
Overhead Stacker Conveyor
Dozer Building
Sevice
Coal Unloading Pit
Coal Trains Out
Coal Trains In
Workshop & Administration
RL 25.49
RL 0.00 LWD
7.775 M MIN OPERATING
28.45 MAX OPERATING
15° MAX OPERATING
15° MIN OPERATING
120,000 DWT UNLADEN AT HHW
60,000 DWT LOADED AT LLW
N
100 0 100 200 300 400 500m
Scale

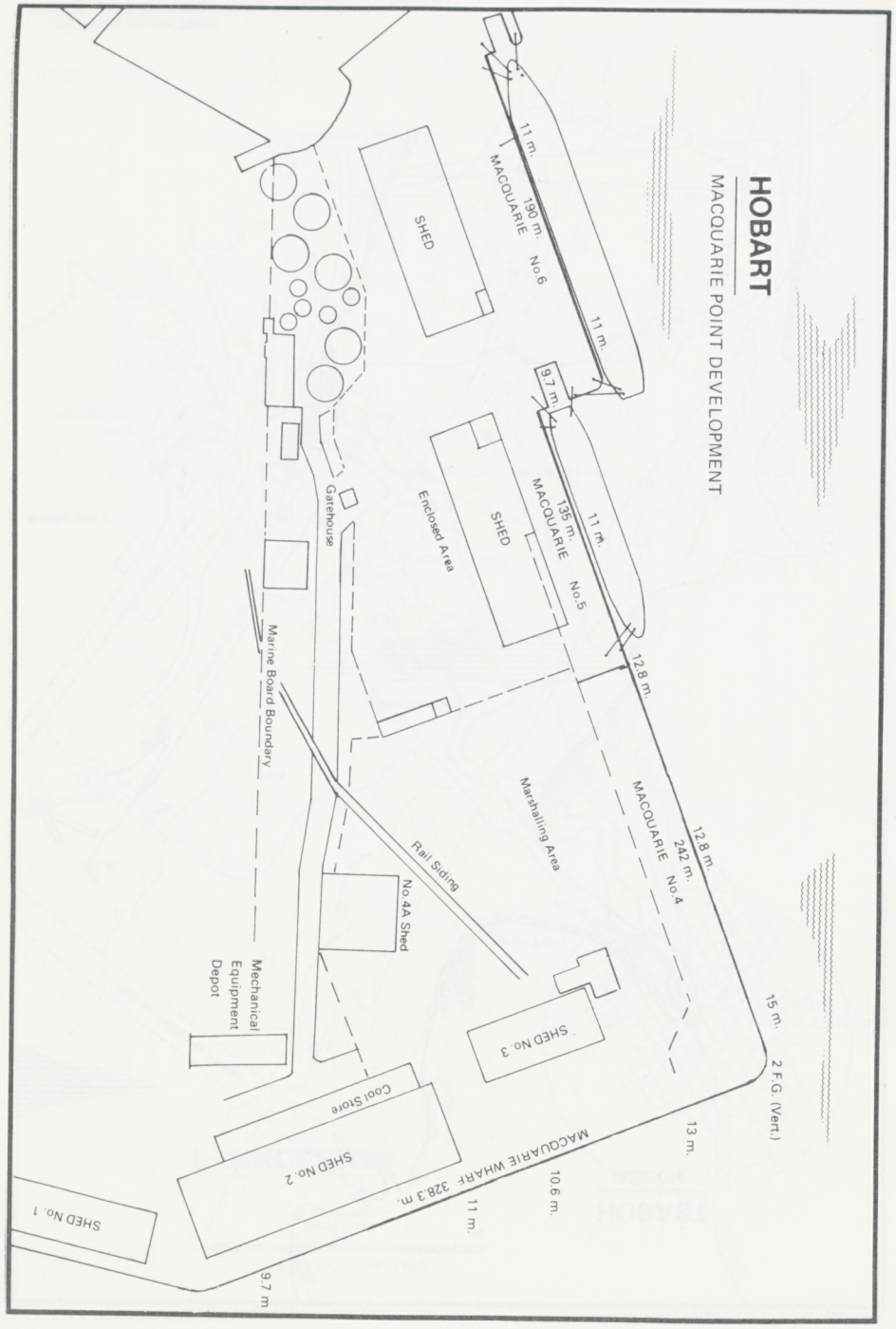

Detail 1
GENERAL CARGO WHARF
DEPTHS ARE IN METRES
Detail 2
BULK LOADING WHARF
DEPTHS ARE IN METRES
Locality Sketch
Recommended Track (Aus. Chart 715)
BREMER ISLAND
MELVILLE BAY
GOVE HARBOUR
Dundas Pt.
Parfitt Pt
Granite Is
Strath Is
Drimmie Hd
West Woody Woody Is
East Woody
Mbarnumada Pt
Fuel/Oil Tanks
Caustic Soda Tanks
Storage Shed
Conveyor
Top Rock Fill
Israel Road
General Cargo Wharf
Water Tower
Light Tower
Access Bridge & Conveyor to Bulk Loading Wharf
GOVE
1
2
N


GROOTE EYLANDT
Milner Bay
Medical Centre
Police Station
Customs House
GREEN BELT LEASE
Administration Block
Port Office
Workshop
Small Vessel Cargo Jetty
Customs Office
Ore Conveyor
Ore Stock/Pile
Oil Storage Tanks
INDUSTRIAL LEASES
Ore Stockpile
Ore Stockpile
Ore Stockpile
Depth 36 ft. M.L.W.O.S.
Jetty
1000 500 0 1000 2000 Feet
N

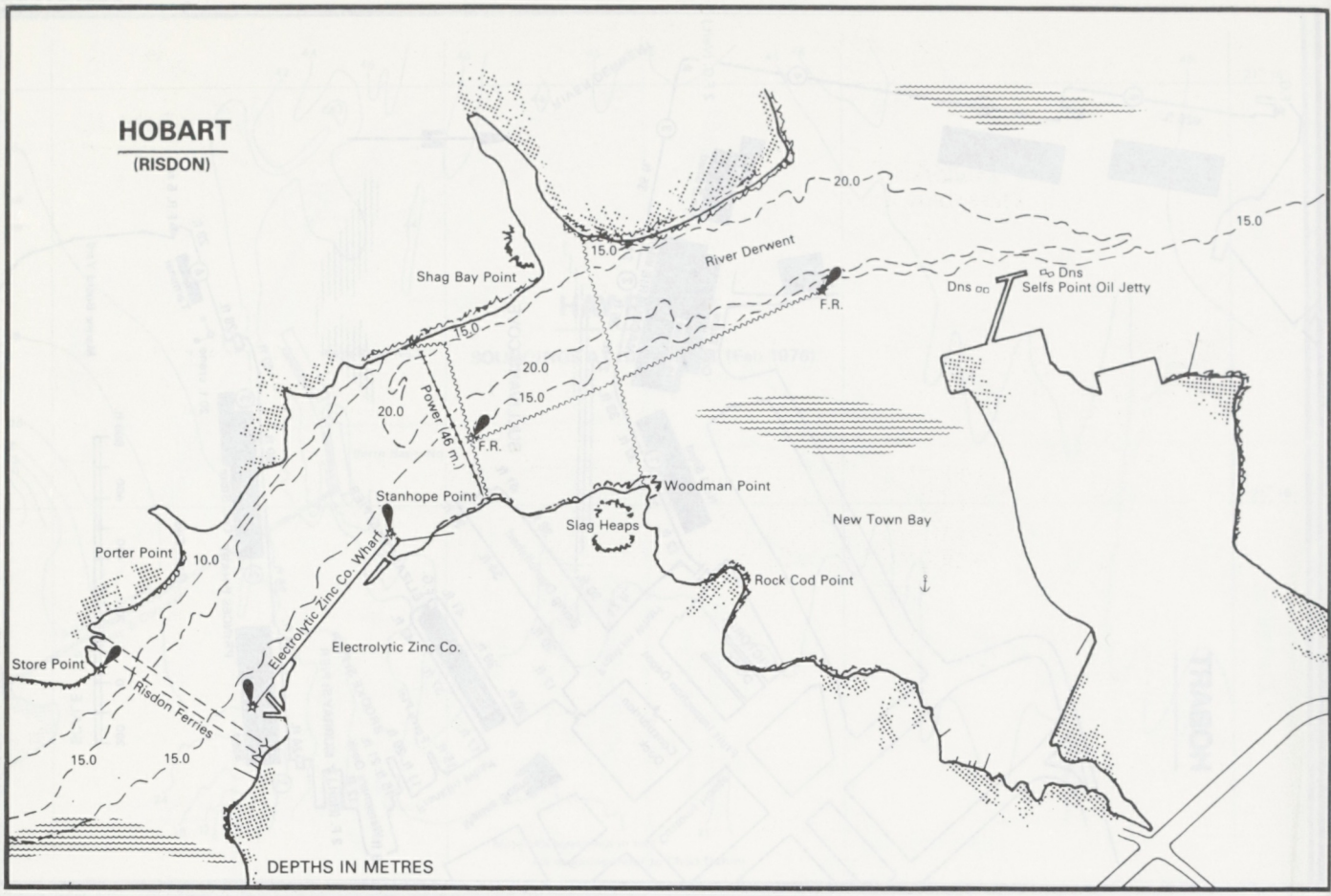

HAY POINT
SOUNDINGS AT HAY POINT (Feb 1976)
Berth Basin No.2
Berth Basin No.1
Approach Trestle
Roadway & Conveyor
21° 15'
21° 16'
Note: All soundings in feet
All soundings refer to Chart Datum

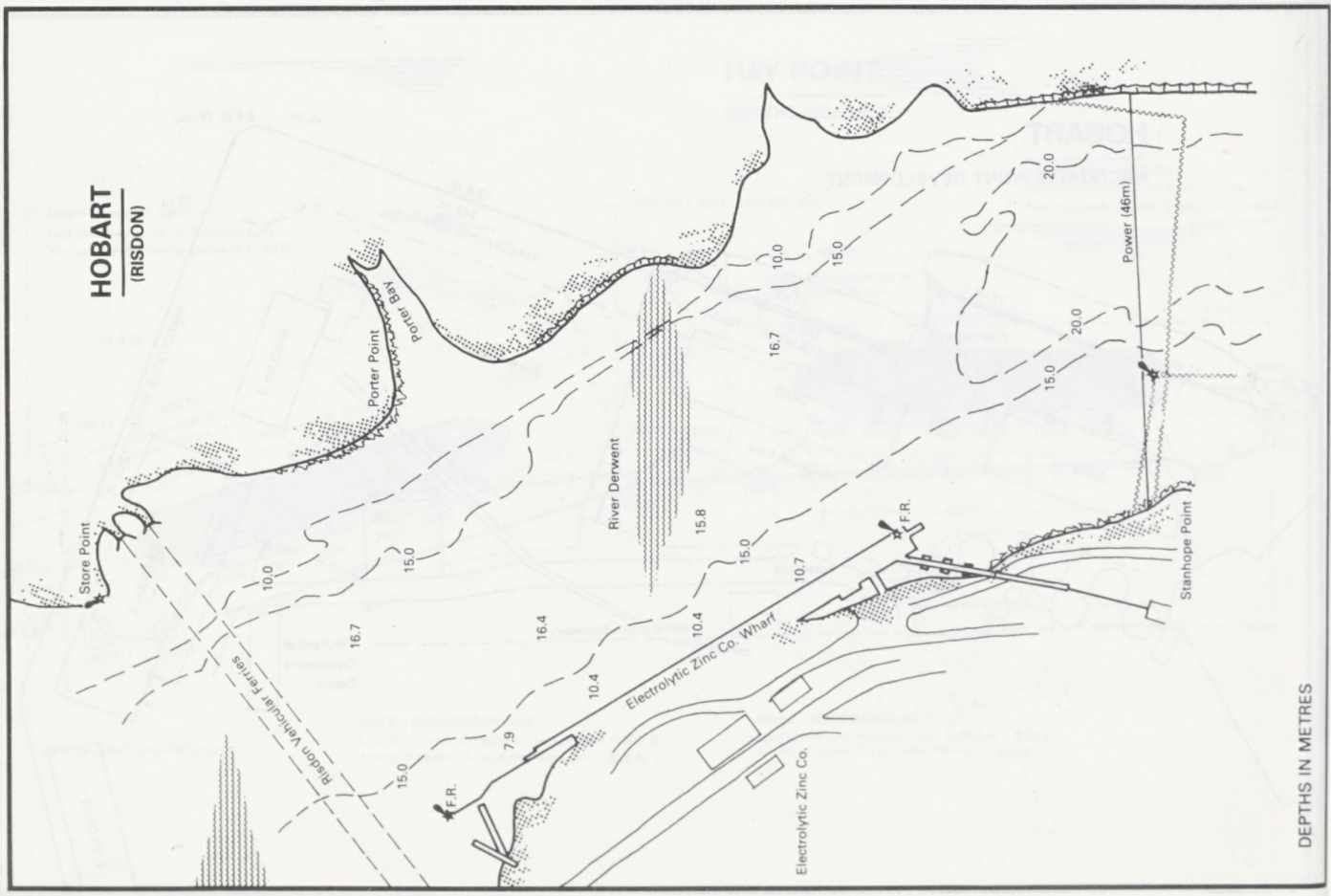

HAY POINT
BERTHS NOs 1 & 2
Line of approach lights –
Red over Red at 15° to Berthing Line
Min. approach Channel Depth R.L. 40 ft.
BERTH LIMIT LIGHTS –Blue–
Line of approach lights
Red over red at 15° to Berthing Line
Min approach Channel Depth –RL –43 ft.
525 ft.
600 ft.
Limits of Dredged Berth
–55 ft. Chart Datum
Alignment at 350°T
BERTH No.1
200 ft.
1MD 4
600 ft.
600 ft.
Limits of dredged berth
–56 ft. Chart Datum
Alignment at 330°T
BERTH No.2
2MD1 & 1MD1
1BD1 1BD2 1BD3 1BD4 1BD5 1BD6
1MD3
1MD2
2MD2
620 ft.
2BD1 2BD2 2BD3 2BD4 2BD5 2BD6
200 ft.
605 ft.
2MD4
2MD3
–BERTH LIMIT LIGHTS Blue
–BERTH LIMIT LIGHTS, Blue
NOTE:- SHIPLOADER No.2
Limits of travel. Between Limit Switches – 605 ft.
Limits of travel: To extreme position – 628 ft.
NOTE:- SHIPLOADER No.1
Limits of travel. Between limit Switches – 620 ft.
Limits of travel. To extreme Position – 628 ft.

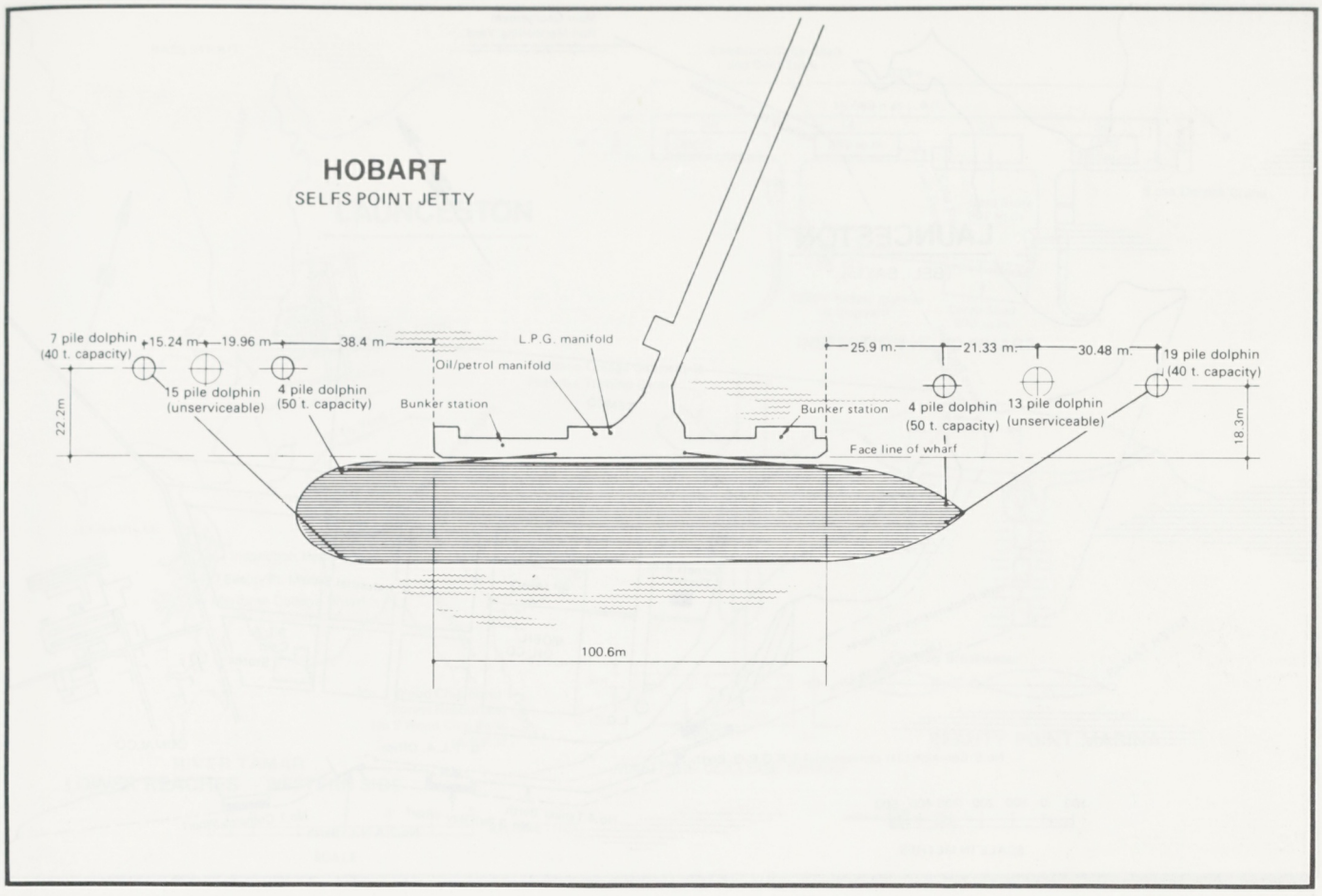

HOBART
F.G.
625 ft.
6
5
4
2 F.G. (Vert.)
VICTORIA DOCK
Customs House
Fruit Inspection Depot
Constitution Dock
Franklin Wharf
No.1 Shed
Cool Store
No.2 Shed
No.3 Shed
MACQUARIE WHARF
12 ft. 29 ft. 32 ft. 33 ft. 27 ft. 35 ft. 34 ft. 35 ft.
RIVER DERWENT
Being Demolished
12 ft. 30 ft. 17 ft. 30 ft. 20 ft. 39 ft. 38 ft. 41 ft. 34 ft. 39 ft.
SULLIVANS COVE
Marine Board
Franklin Wharf
Shed
17 ft. 15 ft. 11 ft. 20 ft. 15 ft. 21 ft. 37 ft. 41 ft. 43 ft.
F.G.
Ferry Pier
ELIZABETH St PIER
BROOKE St PIER
9 ft Watermens Dock
12 ft
2 F. (Horl.)
MURRAY St PIER
N
1
24 ft. 24 ft. 25 ft. 30 ft. 40 ft. 28 ft. 28 ft
Shed
PRINCES WHARF
2
Cool Store
3
20 t. crane
4
Terminal
F.R. 5 m.
Grain Silos
200 0 200 400 600 800 ft.
SCALE
Marine Board Yard

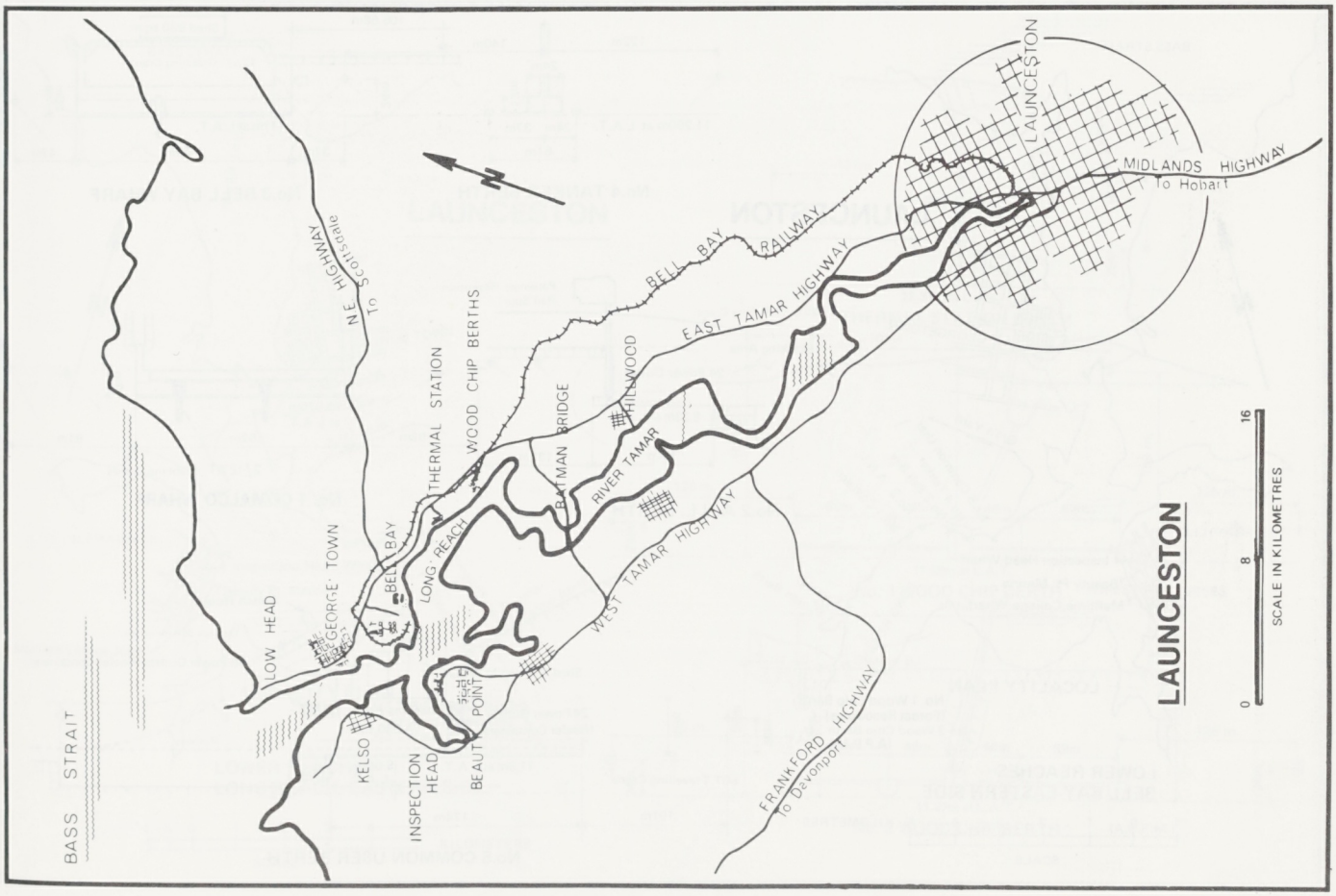

HOBART
MACQUARIE POINT DEVELOPMENT
11 m.
MACQUARIE No.6
190 m.
11 m.
SHED
9.7 m.
MACQUARIE No.5
135 m.
11 m
Enclosed Area
SHED
Gatehouse
12.8 m.
Marine Board Boundary
Marshalling Area
MACQUARIE No.4
242 m.
12.8 m.
Rail Siding
No.4A Shed
Mechanical Equipment Depot
SHED No. 3
15 m.
2 F.G. (Vert.)
Cool Store
SHED No. 2
MACQUARIE WHARF 328.3 m.
13 m.
10.6 m.
11 m.
SHED No. 1
9.7 m

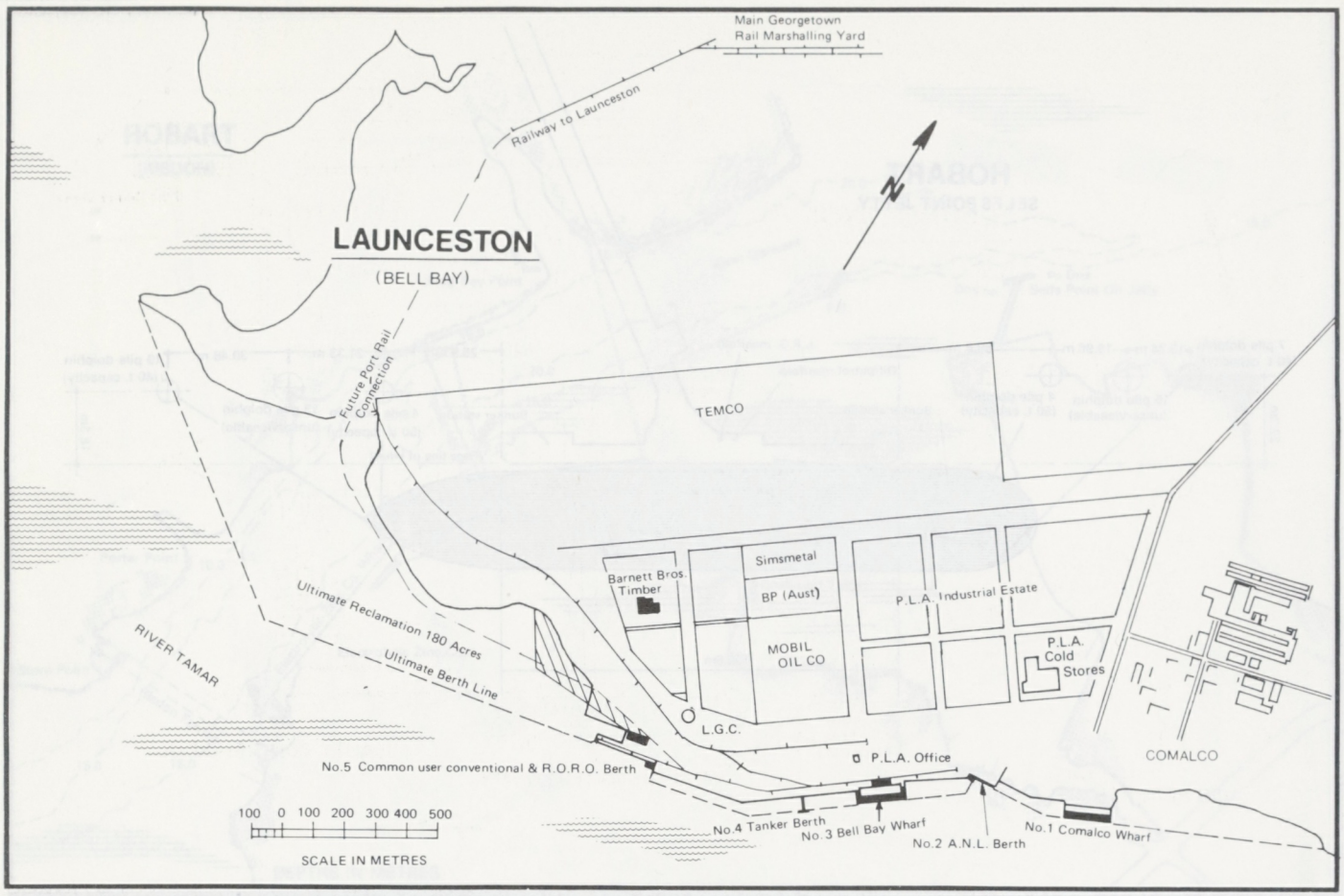
AUSTRALIA

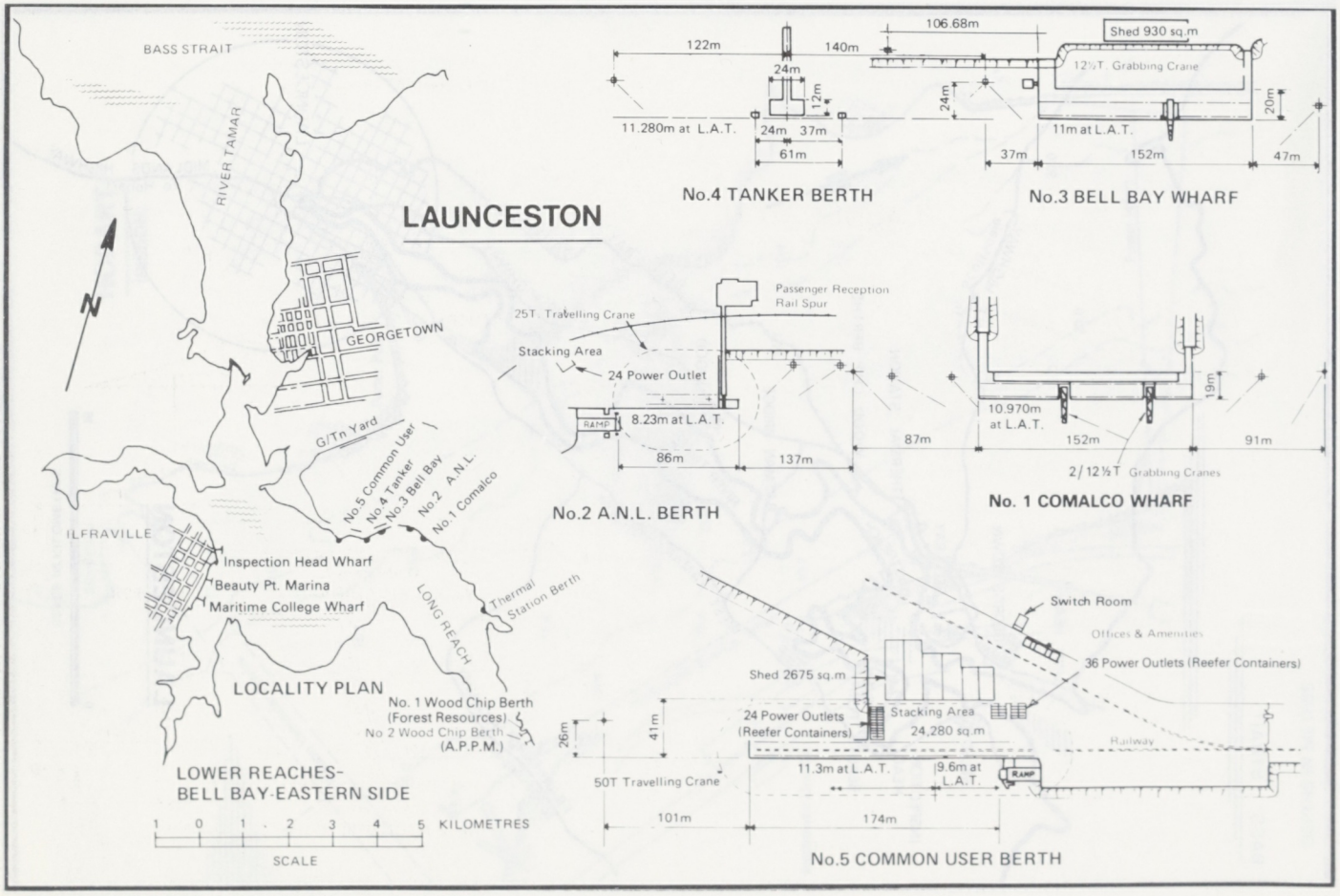

HOBART
(RISDON)
Shag Bay Point
River Derwent
20.0
15.0
F.R.
Dns
Selfs Point Oil Jetty
Power (46 m)
Stanhope Point
Woodman Point
Slag Heaps
New Town Bay
Porter Point
10.0
Electrolytic Zinc Co. Wharf
Rock Cod Point
Electrolytic Zinc Co.
Store Point
Risdon Ferries
DEPTHS IN METRES

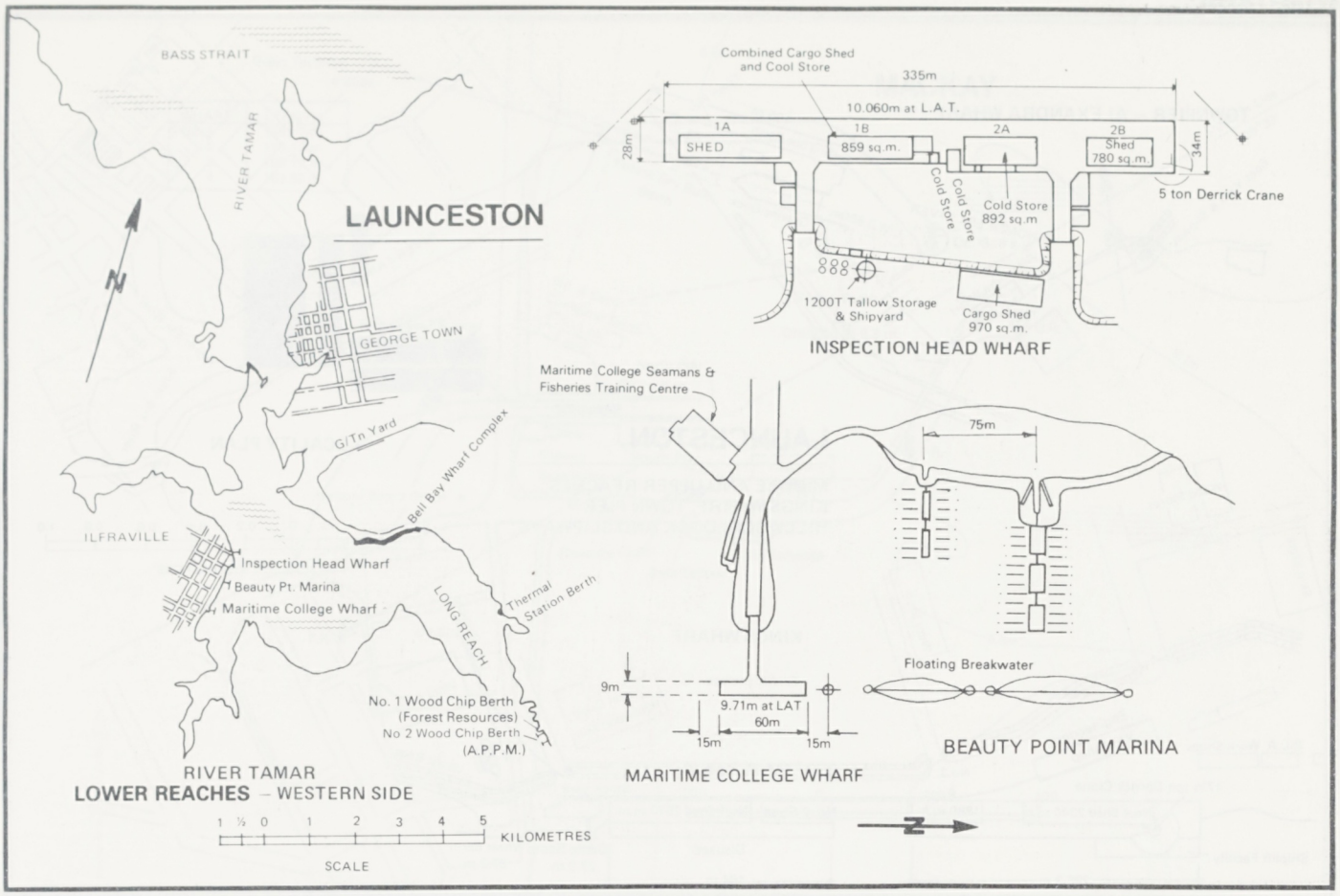

HOBART
(RISDON)
Porter Bay
Porter Point
Store Point
River Derwent
Power (46m)
20.0
15.0
10.0
16.7
15.8
10.7
16.4
10.4
7.9
F.R.
Stanhope Point
Risdon Vehicular Ferries
Electrolytic Zinc Co. Wharf
Electrolytic Zinc Co.
DEPTHS IN METRES

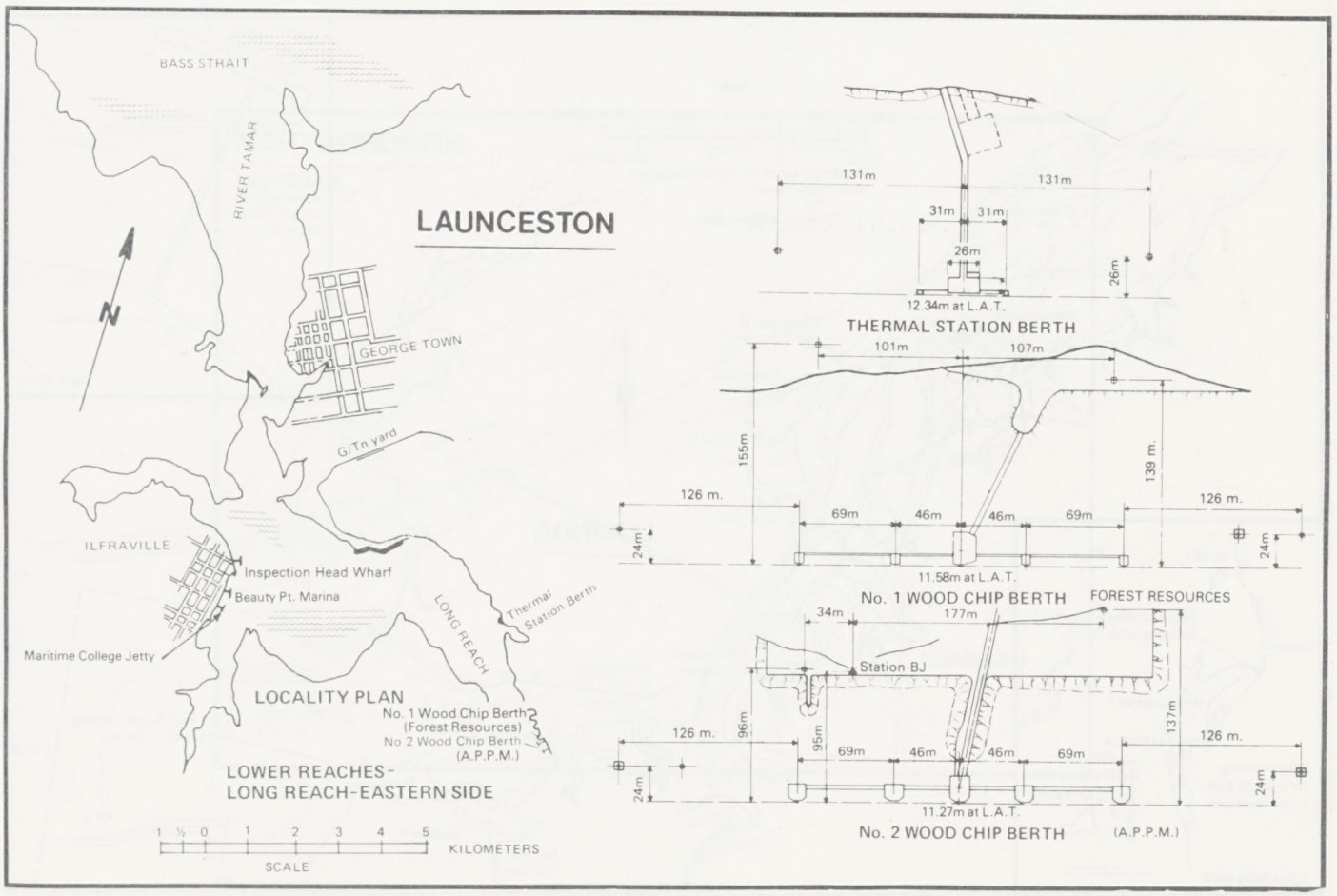

HOBART
SELFS POINT JETTY
7 pile dolphin (40 t. capacity)
15.24 m
19.96 m
38.4 m
15 pile dolphin (unserviceable)
4 pile dolphin (50 t. capacity)
Bunker station
L.P.G. manifold
Oil/petrol manifold
22.2m
25.9 m
21.33 m
30.48 m
19 pile dolphin (40 t. capacity)
4 pile dolphin (50 t. capacity)
13 pile dolphin (unserviceable)
Bunker station
Face line of wharf
18.3m
100.6m

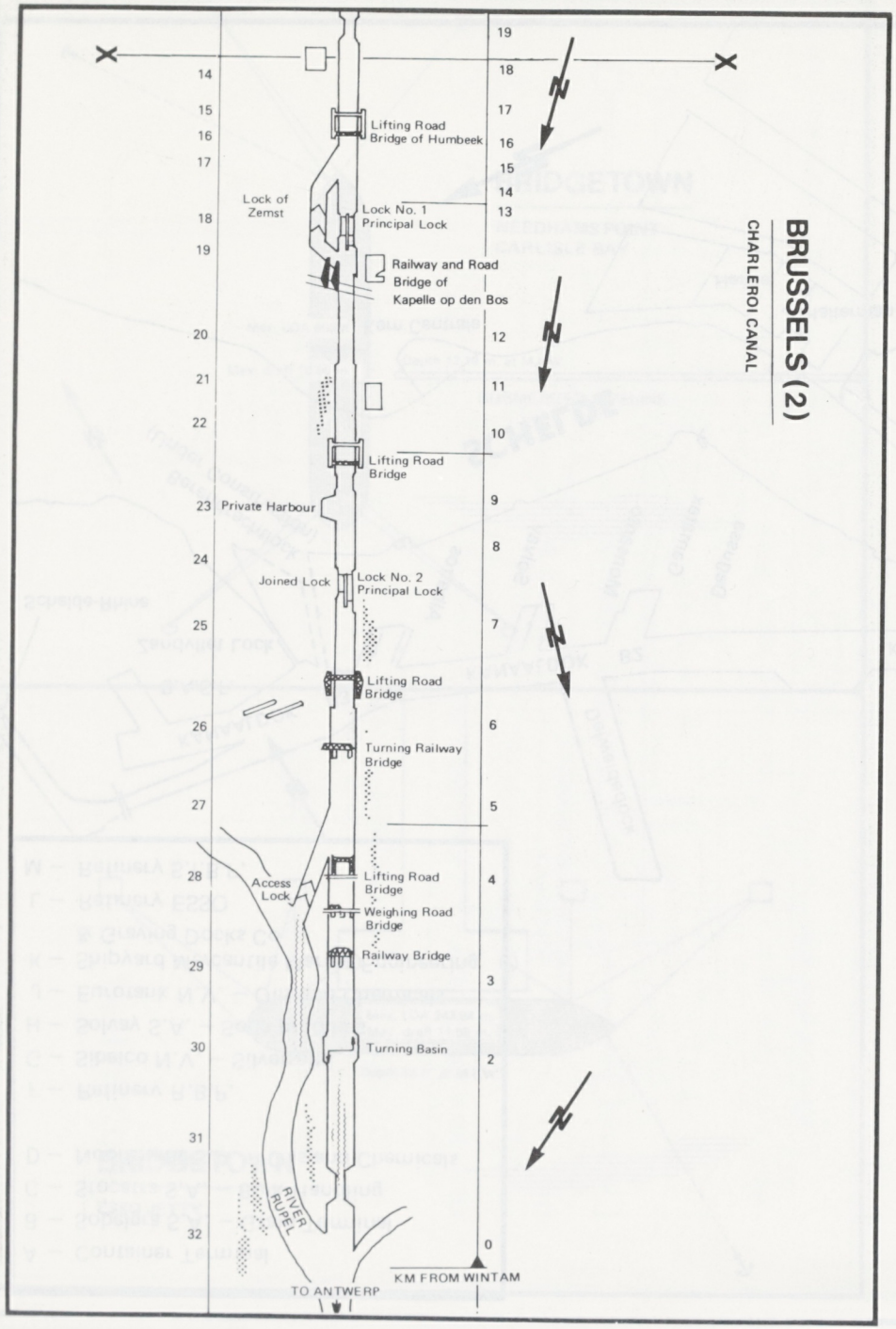

LAUNCESTON
MIDLANDS HIGHWAY
To Hobart
BELL BAY RAILWAY
EAST TAMAR HIGHWAY
N.E. HIGHWAY
To Scottsdale
THERMAL STATION
WOOD CHIP BERTHS
BATMAN BRIDGE
HILLWOOD
RIVER TAMAR
LONG REACH
BELL BAY
GEORGE TOWN
WEST TAMAR HIGHWAY
LOW HEAD
BASS STRAIT
KELSO
INSPECTION HEAD
BEAUTY POINT
FRANKFORD HIGHWAY
To Devonport
LAUNCESTON
0
8
16
SCALE IN KILOMETRES

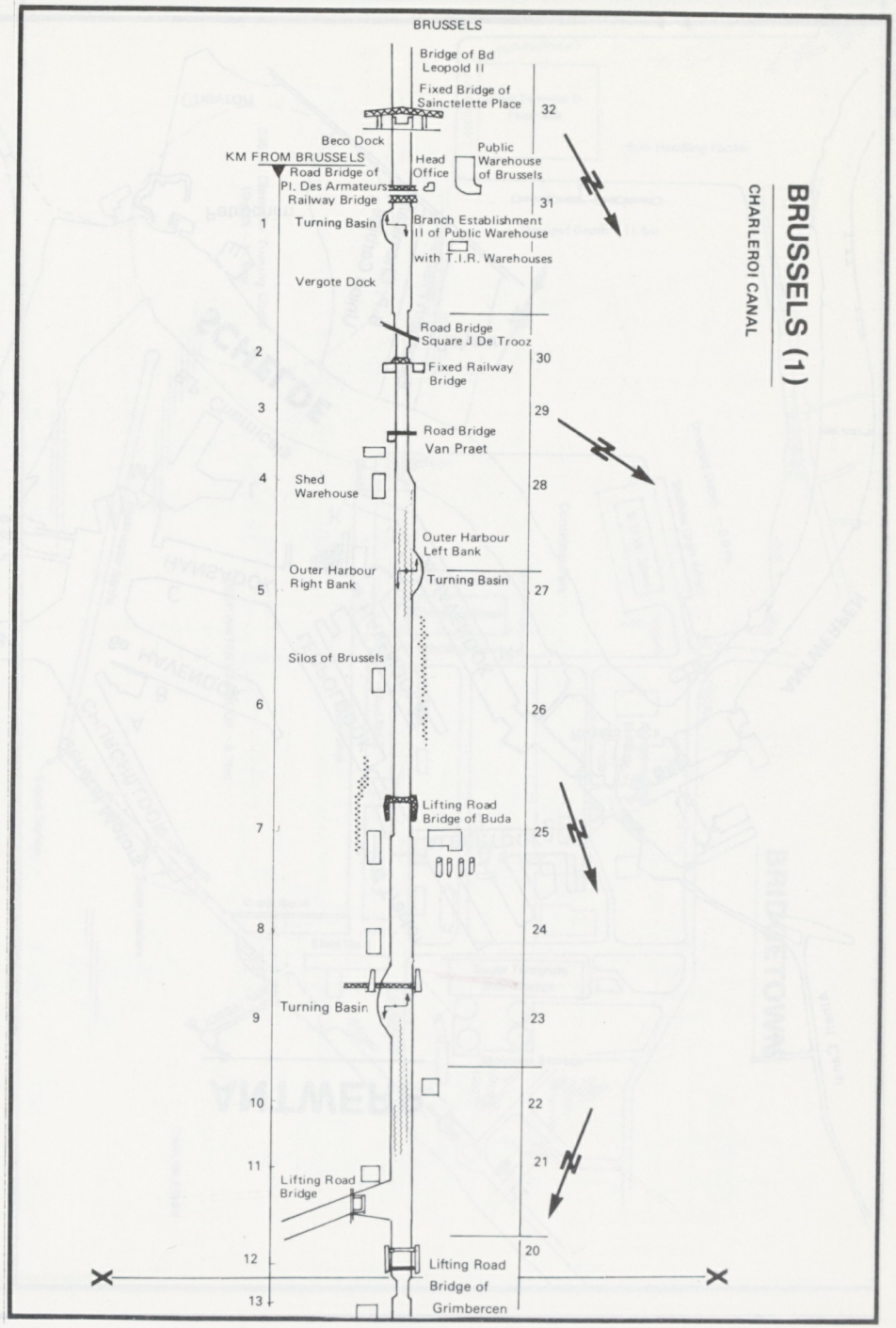

Main Georgetown
Rail Marshalling Yard
Railway to Launceston
LAUNCESTON
(BELL BAY)
Future Port Rail Connection
TEMCO
Barnett Bros. Timber
Simsmetal
BP (Aust)
MOBIL OIL CO
P.L.A. Industrial Estate
P.L.A. Cold Stores
Ultimate Reclamation 180 Acres
Ultimate Berth Line
RIVER TAMAR
L.G.C.
P.L.A. Office
COMALCO
No.5 Common user conventional & R.O.R.O. Berth
No.4 Tanker Berth
No.3 Bell Bay Wharf
No.2 A.N.L. Berth
No.1 Comalco Wharf
100 0 100 200 300 400 500
SCALE IN METRES

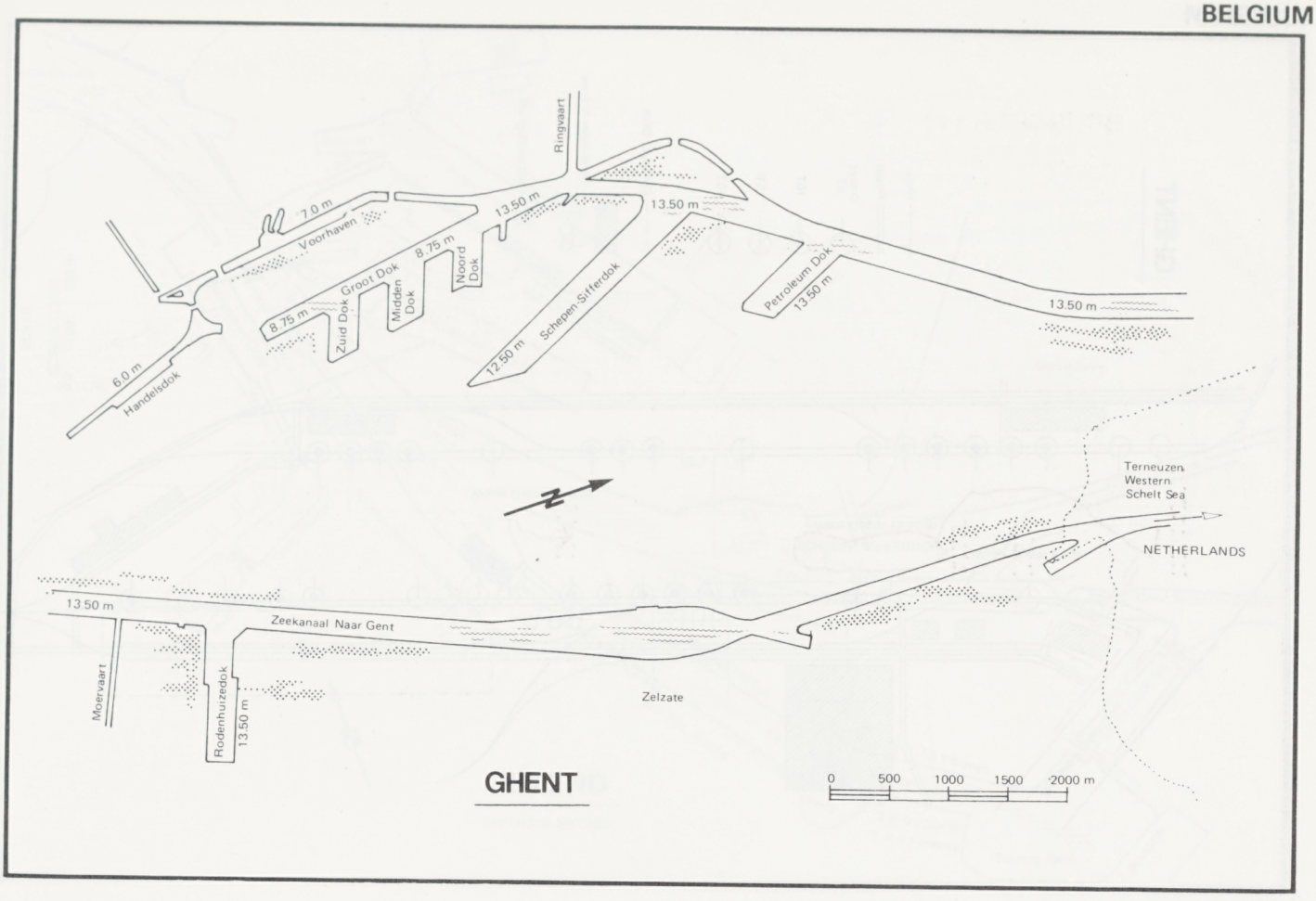

BASS STRAIT
RIVER TAMAR
LAUNCESTON
GEORGETOWN
G/Tn Yard
No.5 Common User
No.4 Tanker
No.3 Bell Bay
No.2 A.N.L.
No.1 Comalco
ILFRAVILLE
Inspection Head Wharf
Beauty Pt. Marina
Maritime College Wharf
LONG REACH
Thermal Station Berth
LOCALITY PLAN
No. 1 Wood Chip Berth (Forest Resources)
No 2 Wood Chip Berth (A.P.P.M.)
LOWER REACHES-
BELL BAY-EASTERN SIDE
1 0 1 2 3 4 5 KILOMETRES
SCALE
122m
140m
24m
12m
11.280m at L.A.T.
24m 37m
61m
106.68m
Shed 930 sq.m
12½T. Grabbing Crane
24m
20m
11m at L.A.T.
37m
152m
47m
No.4 TANKER BERTH
No.3 BELL BAY WHARF
Passenger Reception Rail Spur
25T. Travelling Crane
Stacking Area
24 Power Outlet
RAMP
8.23m at L.A.T.
86m
137m
No.2 A.N.L. BERTH
10.970m at L.A.T.
19m
87m
152m
91m
2/12½T Grabbing Cranes
No. 1 COMALCO WHARF
Switch Room
Offices & Amenities
36 Power Outlets (Reefer Containers)
Shed 2675 sq.m
24 Power Outlets (Reefer Containers)
Stacking Area 24,280 sq.m
Railway
26m
41m
50T Travelling Crane
11.3m at L.A.T.
9.6m at L.A.T.
RAMP
101m
174m
No.5 COMMON USER BERTH

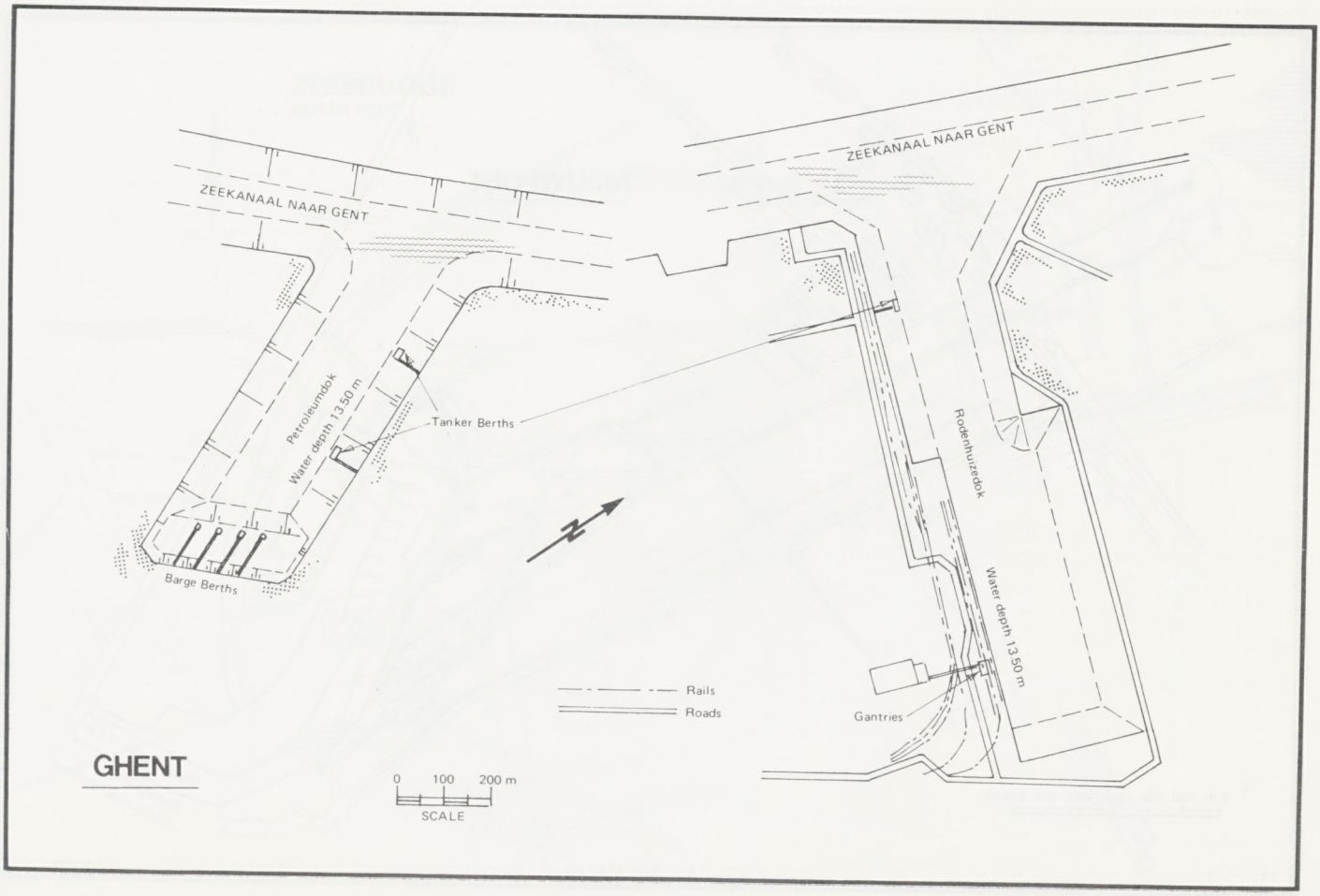

BASS STRAIT
RIVER TAMAR
LAUNCESTON
GEORGE TOWN
G/Tn Yard
Bell Bay Wharf Complex
ILFRAVILLE
Inspection Head Wharf
Beauty Pt. Marina
Maritime College Wharf
LONG REACH
Thermal Station Berth
No. 1 Wood Chip Berth
(Forest Resources)
No 2 Wood Chip Berth
(A.P.P.M.)
RIVER TAMAR
LOWER REACHES – WESTERN SIDE
1 ½ 0 1 2 3 4 5
KILOMETRES
SCALE
Combined Cargo Shed
and Cool Store
335m
10.060m at L.A.T.
28m
1A
SHED
1B
859 sq.m.
2A
2B
Shed
780 sq.m.
34m
Cold Store
Cold Store
Cold Store
892 sq.m
5 ton Derrick Crane
1200T Tallow Storage
& Shipyard
Cargo Shed
970 sq.m.
INSPECTION HEAD WHARF
Maritime College Seamans &
Fisheries Training Centre
75m
9m
9.71m at LAT
60m
15m
15m
Floating Breakwater
BEAUTY POINT MARINA
MARITIME COLLEGE WHARF

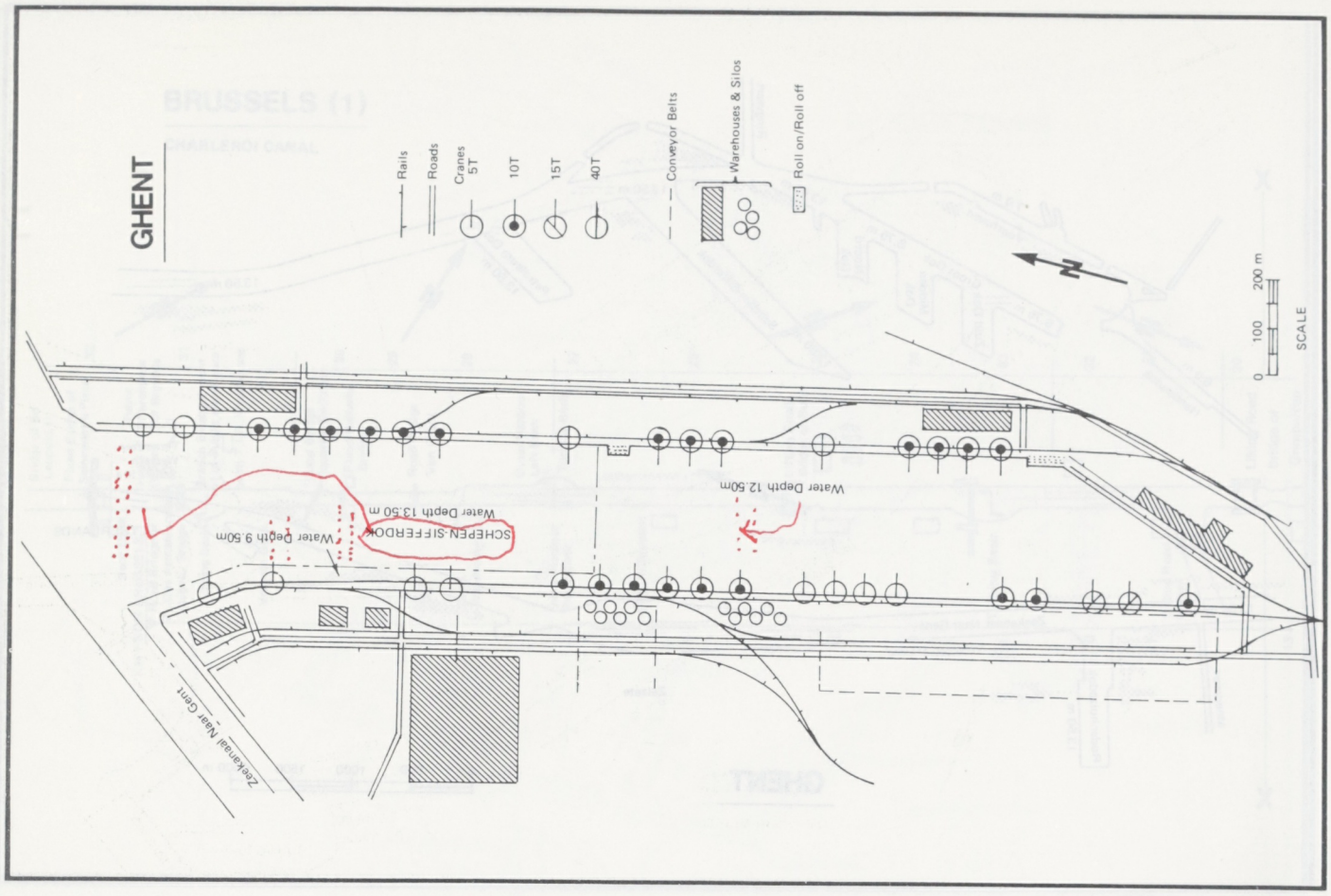

BASS STRAIT
RIVER TAMAR
LAUNCESTON
GEORGE TOWN
G/Tn yard
ILFRAVILLE
Inspection Head Wharf
Beauty Pt. Marina
Maritime College Jetty
LONG REACH
Thermal Station Berth
LOCALITY PLAN
No. 1 Wood Chip Berth
(Forest Resources)
No 2 Wood Chip Berth
(A.P.P.M.)
LOWER REACHES-
LONG REACH-EASTERN SIDE
1 ½ 0 1 2 3 4 5
KILOMETERS
SCALE
131m
131m
31m
31m
26m
26m
12.34m at L.A.T.
THERMAL STATION BERTH
101m
107m
155m
139 m.
126 m.
69m
46m
46m
69m
126 m.
24m
24m
11.58m at L.A.T.
No. 1 WOOD CHIP BERTH
FOREST RESOURCES
34m
177m
Station BJ
96m
95m
137m
126 m.
69m
46m
46m
69m
126 m.
24m
24m
11.27m at L.A.T.
No. 2 WOOD CHIP BERTH
(A.P.P.M.)

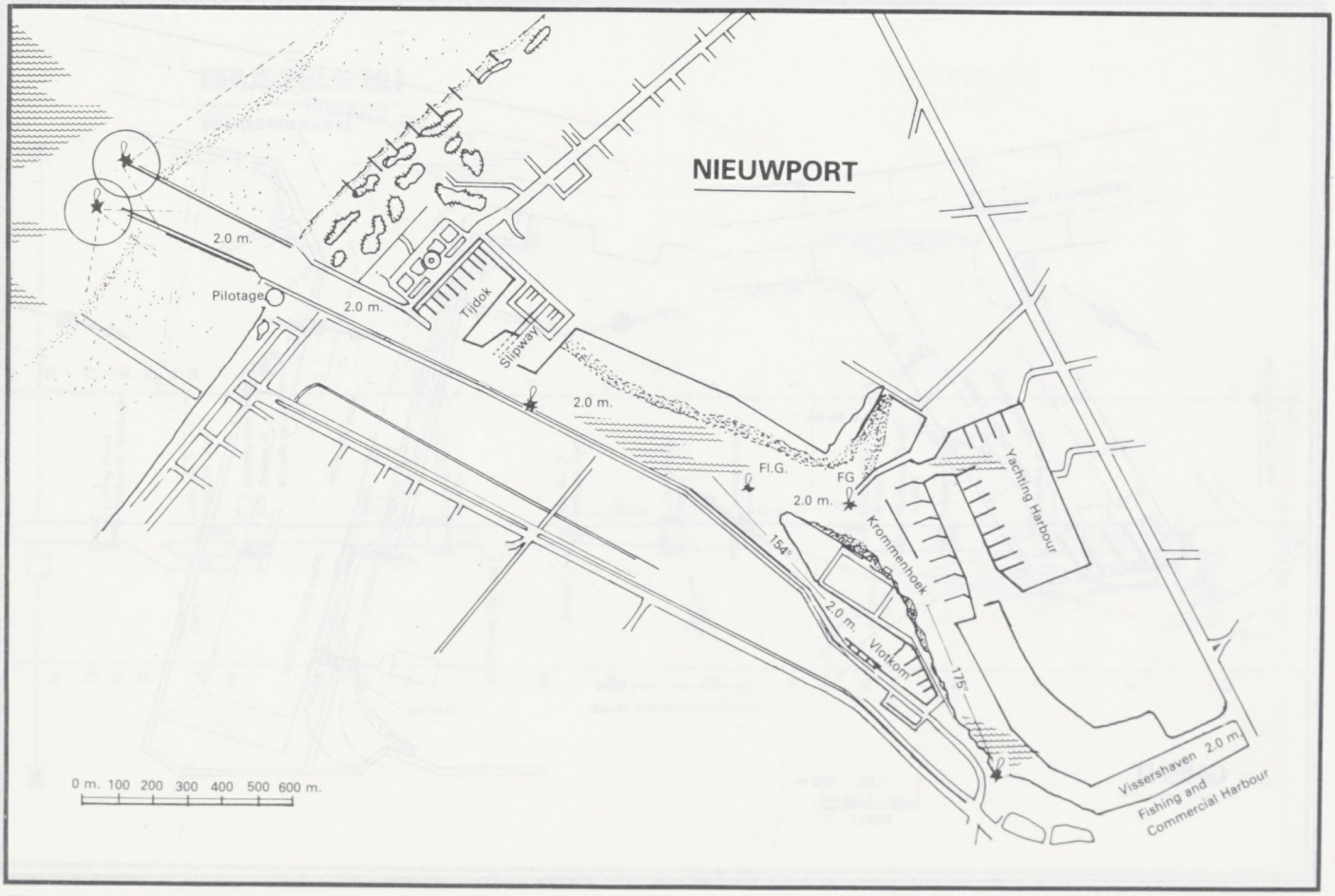

BRUSSELS (2)
CHARLEROI CANAL
Lifting Road Bridge of Humbeek
Lock of Zemst
Lock No. 1 Principal Lock
Railway and Road Bridge of Kapelle op den Bos
Lifting Road Bridge
Private Harbour
Joined Lock
Lock No. 2 Principal Lock
Lifting Road Bridge
Turning Railway Bridge
Access Lock
Lifting Road Bridge
Weighing Road Bridge
Railway Bridge
Turning Basin
RIVER RUPEL
TO ANTWERP
KM FROM WINTAM

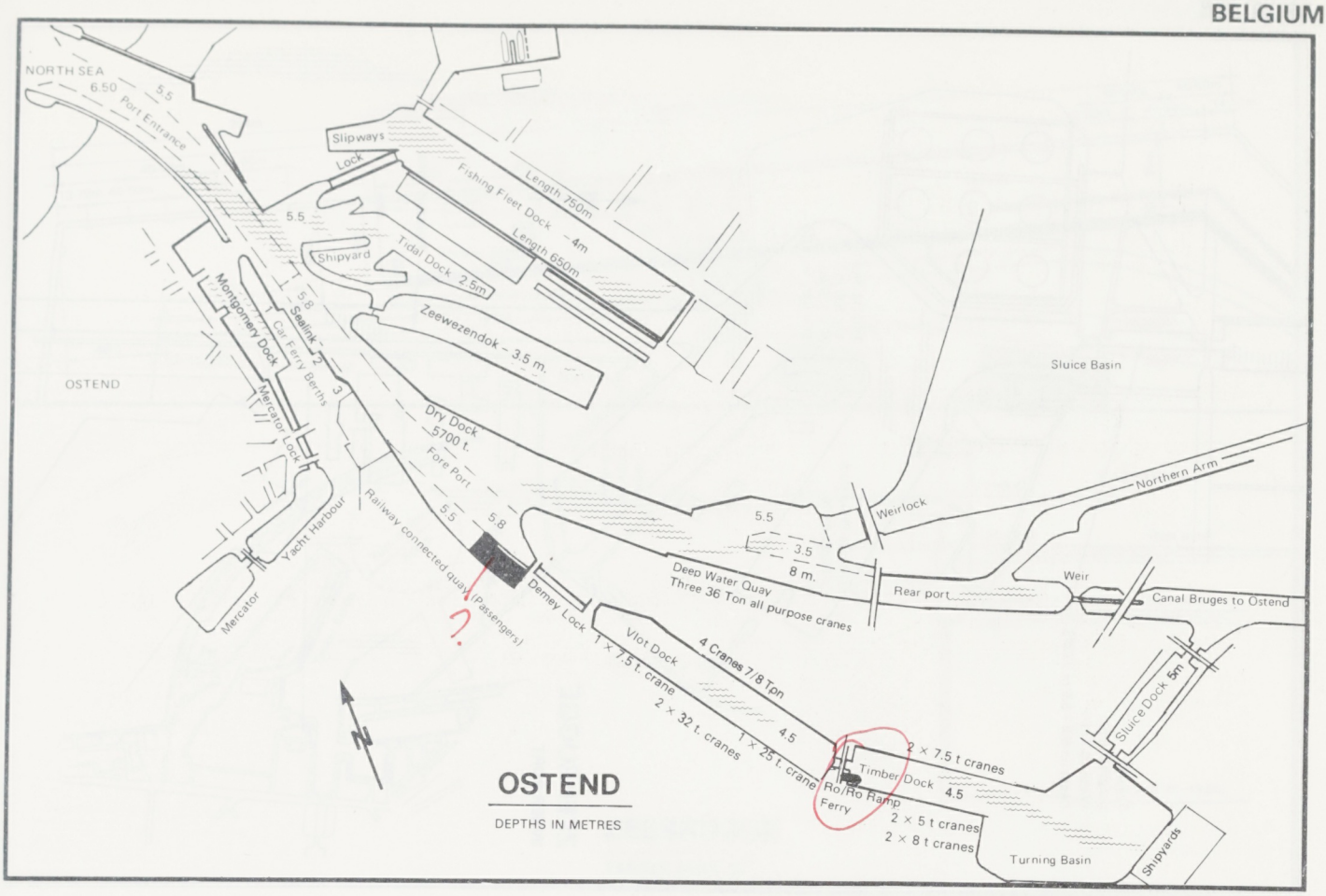

BRUSSELS (1)
CHARLEROI CANAL
BRUSSELS
Bridge of Bd Leopold II
Fixed Bridge of Sainctelette Place
Beco Dock
KM FROM BRUSSELS
Head Office
Public Warehouse of Brussels
Road Bridge of Pl. Des Armateurs
Railway Bridge
Turning Basin
Branch Establishment II of Public Warehouse with T.I.R. Warehouses
Vergote Dock
Road Bridge Square J De Trooz
Fixed Railway Bridge
Road Bridge Van Praet
Shed Warehouse
Outer Harbour Left Bank
Outer Harbour Right Bank
Turning Basin
Silos of Brussels
Lifting Road Bridge of Buda
Turning Basin
Lifting Road Bridge
Lifting Road Bridge of Grimbercen

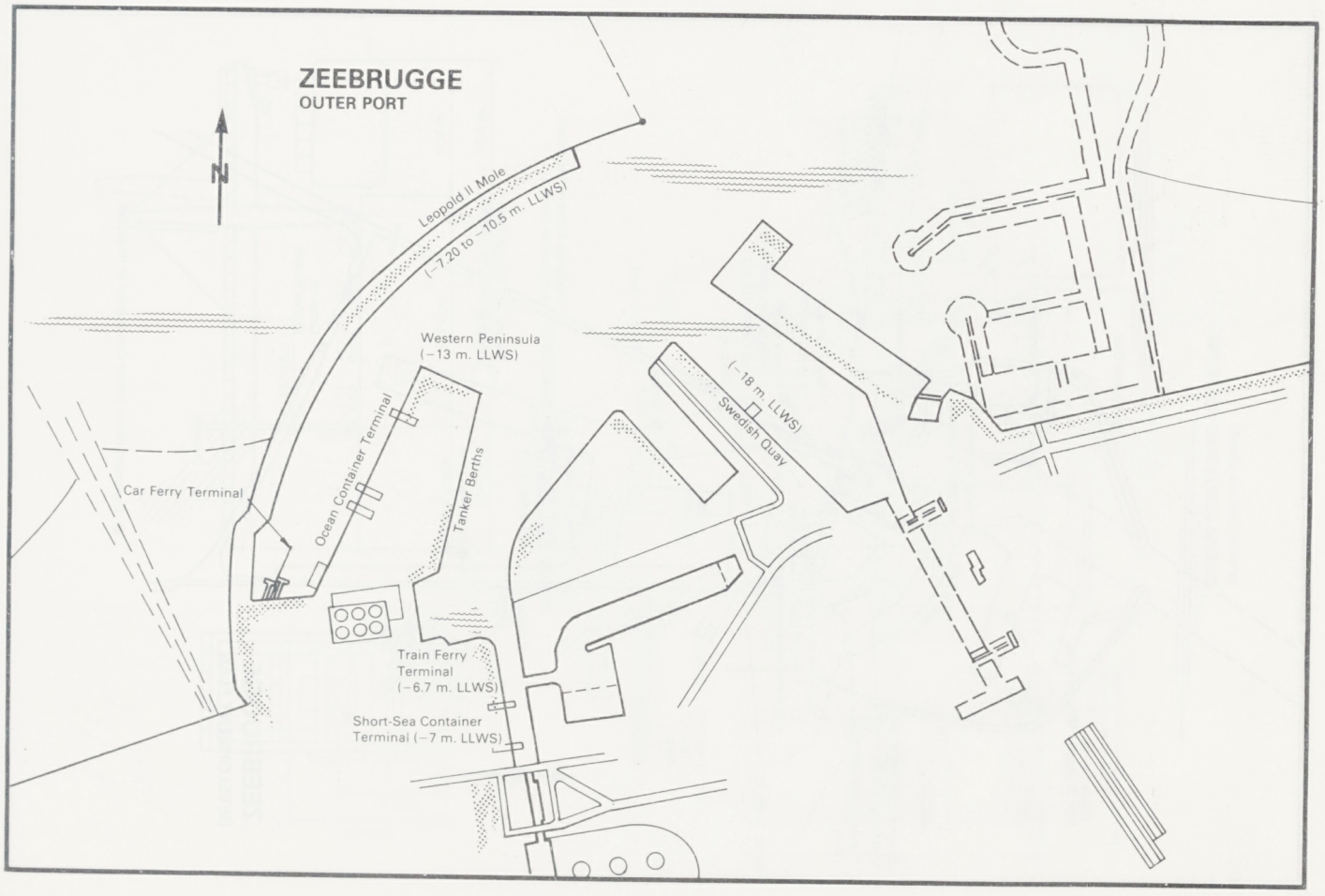

Ringvaart
7.0 m
Voorhaven
13.50 m
13.50 m
8.75 m
Zuid Dok
Groot Dok
8.75 m
Midden Dok
Noord Dok
12.50 m
Schepen-Sifferdok
Petroleum Dok
13.50 m
13.50 m
6.0 m
Handelsdok
Terneuzen
Western Schelt Sea
NETHERLANDS
13.50 m
Zeekanaal Naar Gent
Moervaart
Rodenhuizedok
13.50 m
Zelzate
GHENT
0 500 1000 1500 2000 m

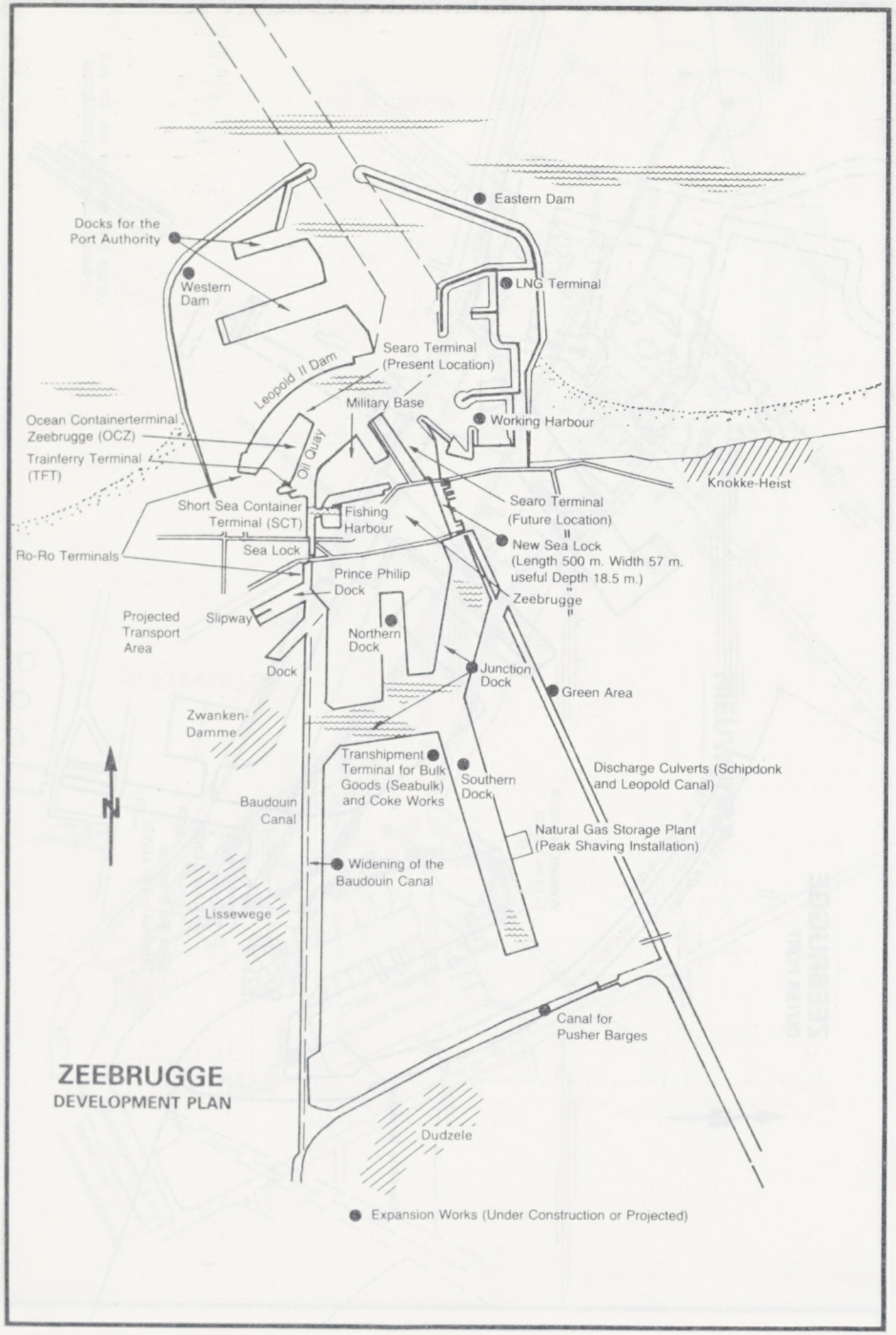

ZEEKANAAL NAAR GENT
ZEEKANAAL NAAR GENT
Petroleumdok
Water depth 13.50 m
Tanker Berths
Barge Berths
Rodenhuizedok
Water depth 13.50 m
Rails
Roads
Gantries
GHENT
0 100 200 m
SCALE

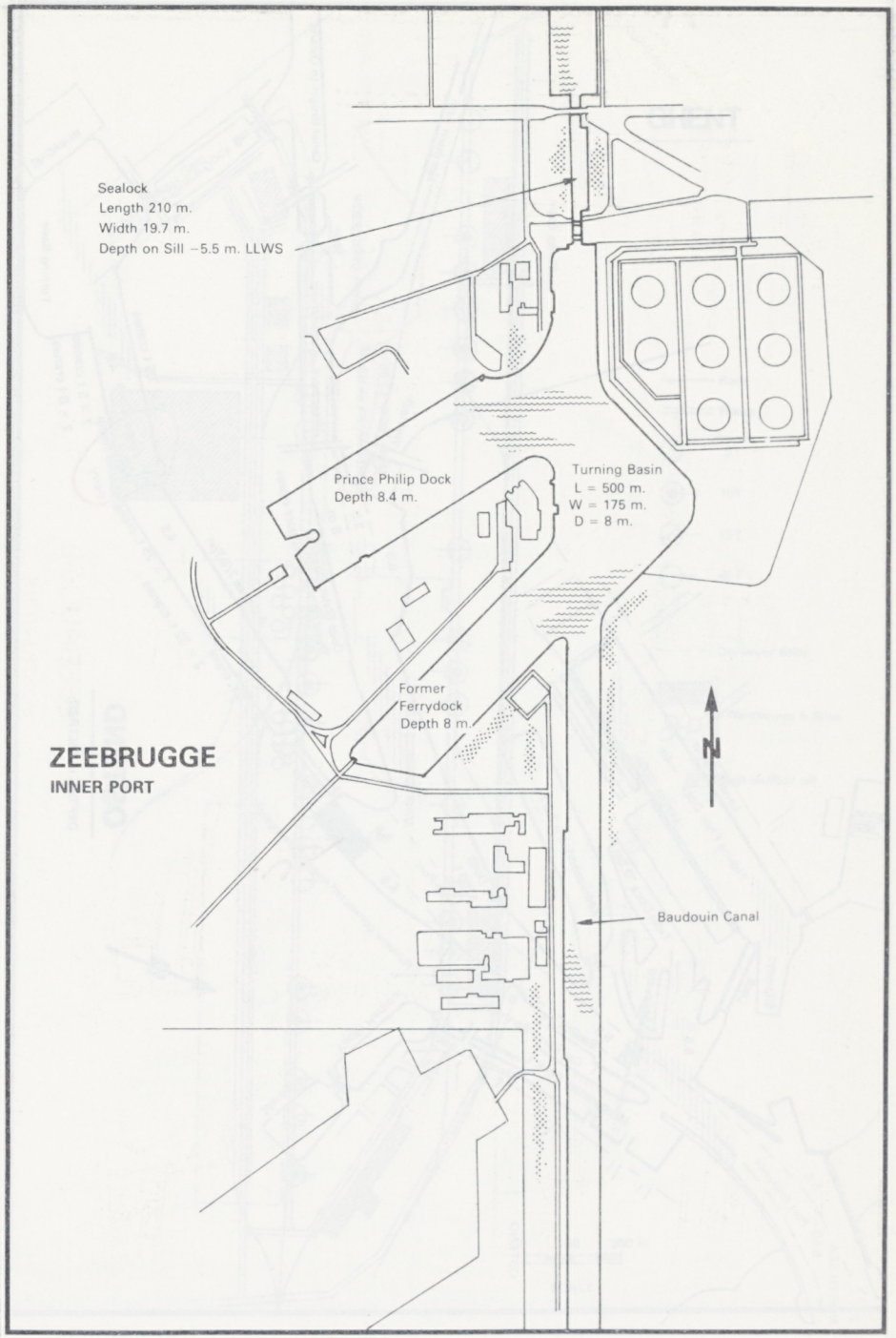

GHENT
Rails
Roads
Cranes
5T
10T
15T
40T
Conveyor Belts
Warehouses & Silos
Roll on/Roll off
N
0
100
200 m
SCALE
Water Depth 12.50m
SCHEPEN-SIFFERDOK
Water Depth 13.50 m
Water Depth 9.50m
Zeekanaal Naar Gent

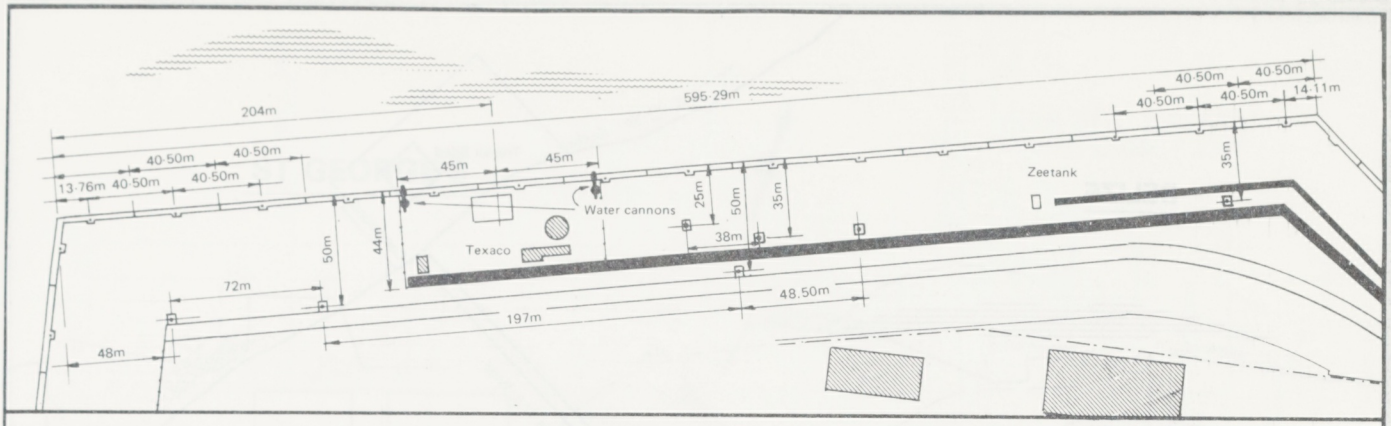

NIEUWPORT
2.0 m.
Pilotage
2.0 m.
Tijdok
Slipway
2.0 m.
Fl.G.
FG
2.0 m.
Yachting Harbour
Krommenhoek
154
2.0 m.
Vlotkom
175
Vissershaven 2.0 m.
Fishing and
Commercial Harbour
0 m. 100 200 300 400 500 600 m.

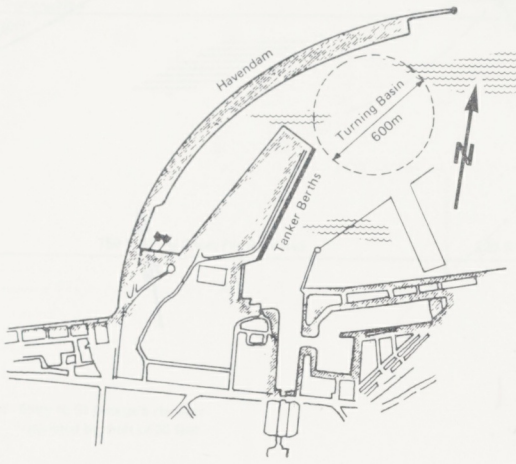

NORTH SEA
6.50
5.5
Port Entrance
Slipways
Lock
Fishing Fleet Dock – 4m
Length 750m
Length 650m
5.5
Shipyard
Tidal Dock – 2.5m
Zeewezendok – 3.5 m.
Montgomery Dock
Sealink
Car Ferry Berths
5.8
OSTEND
Mercator Lock
Mercator
Yacht Harbour
Dry Dock
5700 t.
Fore Port
5.5
5.8
Railway connected quay (Passengers)
?
Sluice Basin
Northern Arm
Weirlock
5.5
3.5
8 m.
Deep Water Quay
Three 36 Ton all purpose cranes
Rear port
Weir
Canal Bruges to Ostend
Demey Lock
1 × 7.5 t. crane
2 × 32 t. cranes
1 × 25 t. crane
Viot Dock
4 Cranes 7/8 Tpn
4.5
Sluice Dock 5m
2 × 7.5 t cranes
Timber Dock 4.5
Ro/Ro Ramp
Ferry
2 × 5 t cranes
2 × 8 t cranes
Turning Basin
Shipyards
N
OSTEND
DEPTHS IN METRES

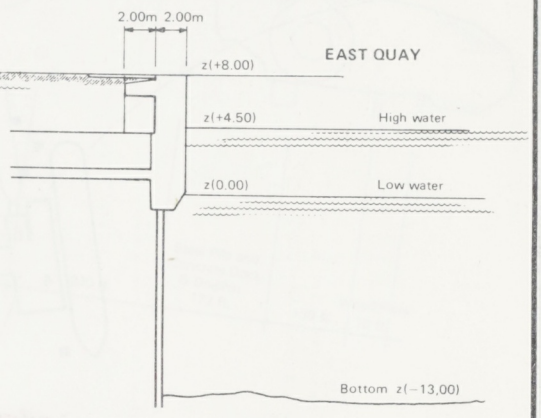

ZEEBRUGGE
OUTER PORT
N
Leopold II Mole
(–7.20 to –10.5 m. LLWS)
Western Peninsula
(–13 m. LLWS)
Ocean Container Terminal
Tanker Berths
(–18 m. LLWS)
Swedish Quay
Car Ferry Terminal
Train Ferry
Terminal
(–6.7 m. LLWS)
Short-Sea Container
Terminal (–7 m. LLWS)


Eastern Dam
Docks for the Port Authority
Western Dam
LNG Terminal
Searo Terminal (Present Location)
Leopold II Dam
Military Base
Working Harbour
Ocean Containerterminal Zeebrugge (OCZ)
Trainferry Terminal (TFT)
Oil Quay
Knokke-Heist
Short Sea Container Terminal (SCT)
Fishing Harbour
Searo Terminal (Future Location)
Sea Lock
New Sea Lock (Length 500 m. Width 57 m. useful Depth 18.5 m.)
Ro-Ro Terminals
Prince Philip Dock
Zeebrugge
Projected Transport Area
Slipway
Northern Dock
Junction Dock
Green Area
Zwanken-Damme
Transhipment Terminal for Bulk Goods (Seabulk) and Coke Works
Southern Dock
Discharge Culverts (Schipdonk and Leopold Canal)
Baudouin Canal
Natural Gas Storage Plant (Peak Shaving Installation)
Widening of the Baudouin Canal
Lissewege
Canal for Pusher Barges
Dudzele
N
ZEEBRUGGE
DEVELOPMENT PLAN
Expansion Works (Under Construction or Projected)


Sealock
Length 210 m.
Width 19.7 m.
Depth on Sill −5.5 m. LLWS
Prince Philip Dock
Depth 8.4 m.
Turning Basin
L = 500 m.
W = 175 m.
D = 8 m.
Former Ferrydock
Depth 8 m
N
ZEEBRUGGE
INNER PORT
Baudouin Canal



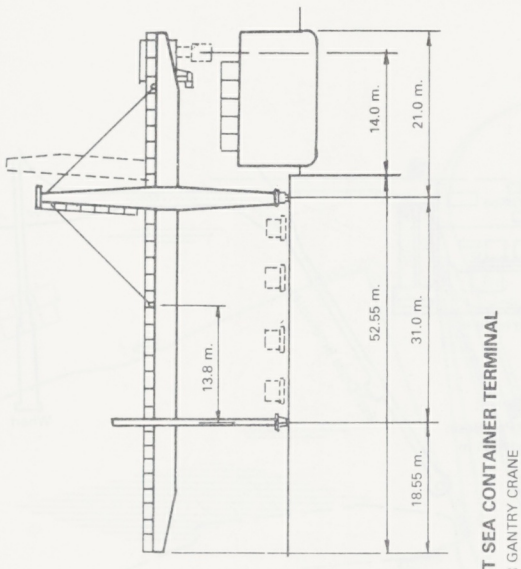


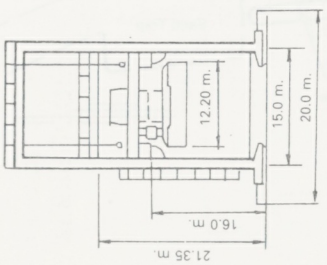


Elevations in metres

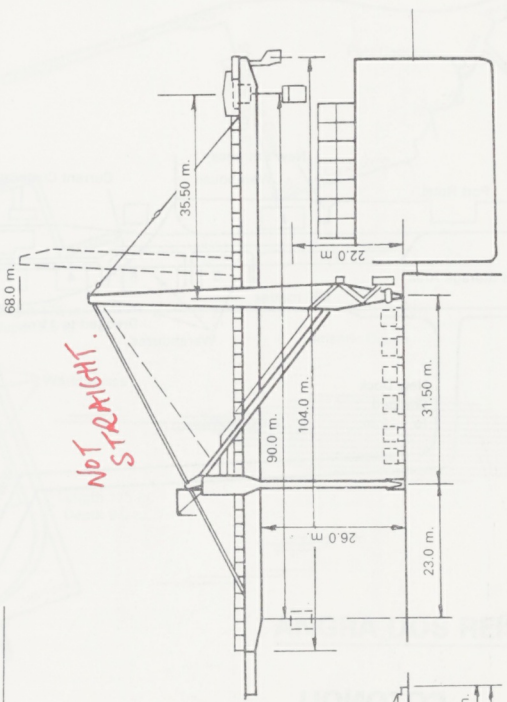
ZEEBRUGGE

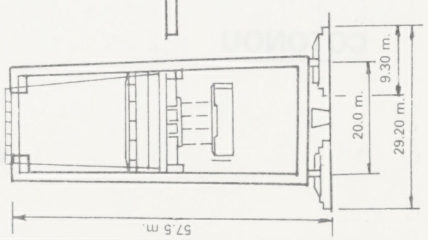
TANKER BERTHS





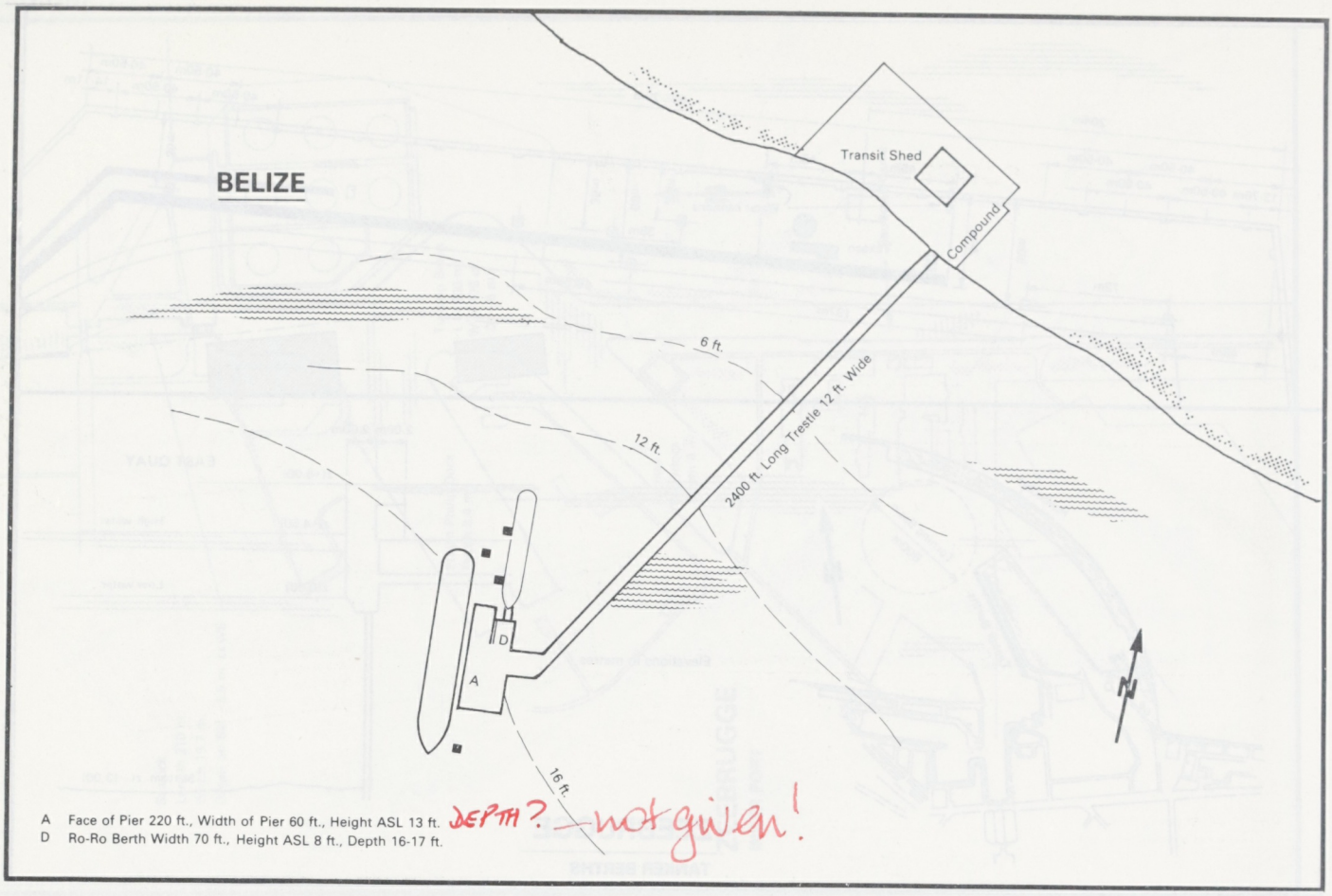
SHORT SEA CONTAINER TERMINAL
PEINER GANTRY CRANE





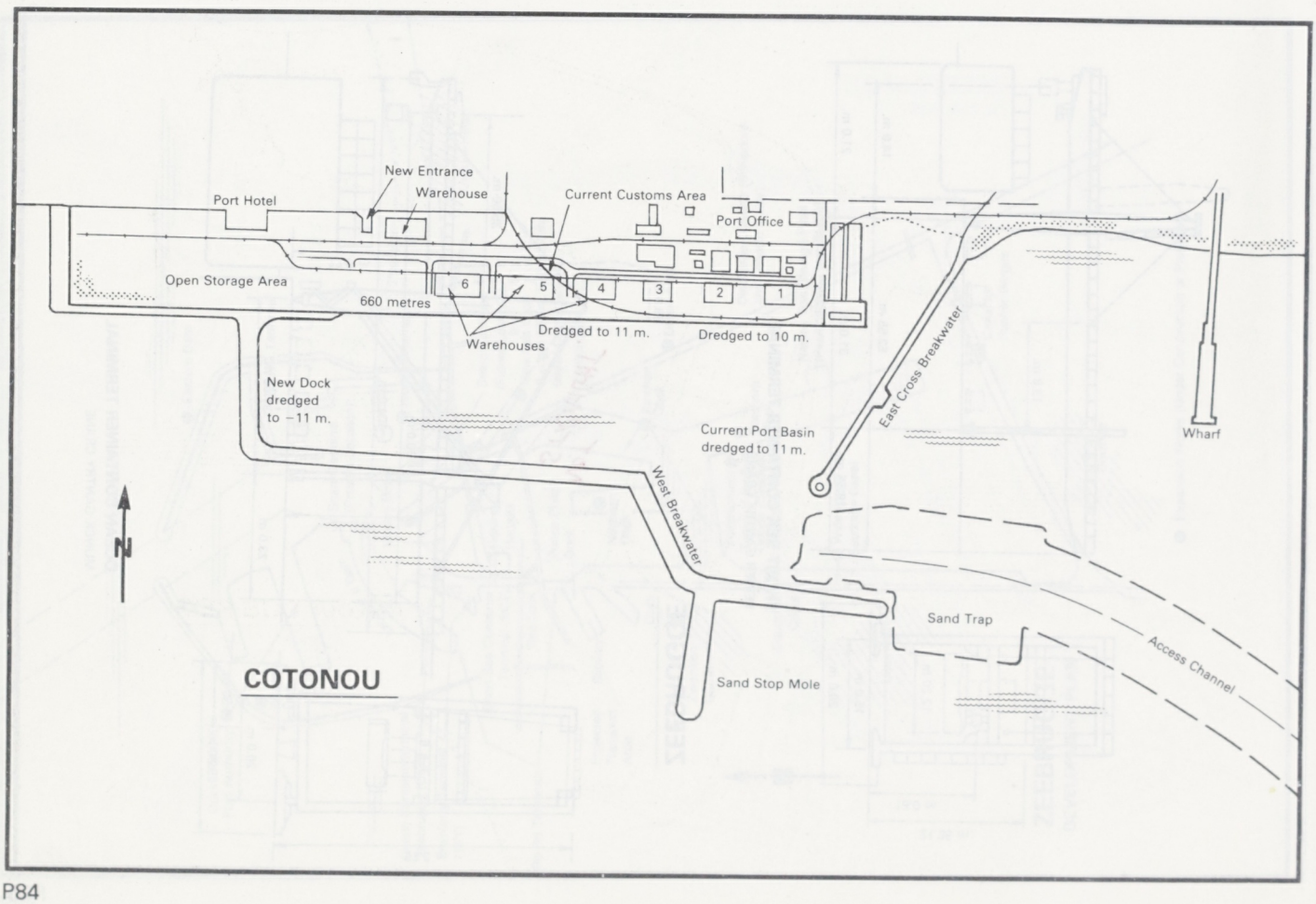
OCEAN CONTAINER TERMINAL
MUNCK GANTRY CRANE

ZEEBRUGGE

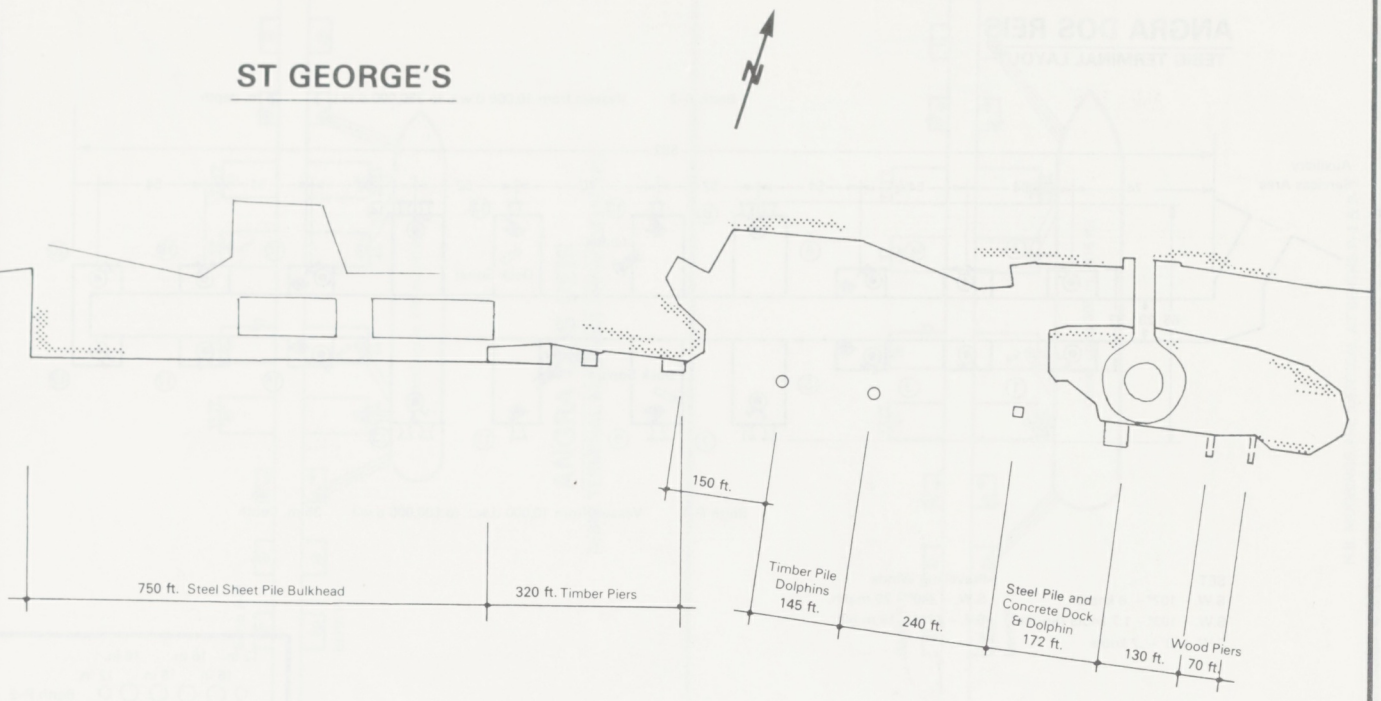


A Face of Pier 220 ft., Width of Pier 60 ft., Height ASL 13 ft.
D Ro-Ro Berth Width 70 ft., Height ASL 8 ft., Depth 16-17 ft.

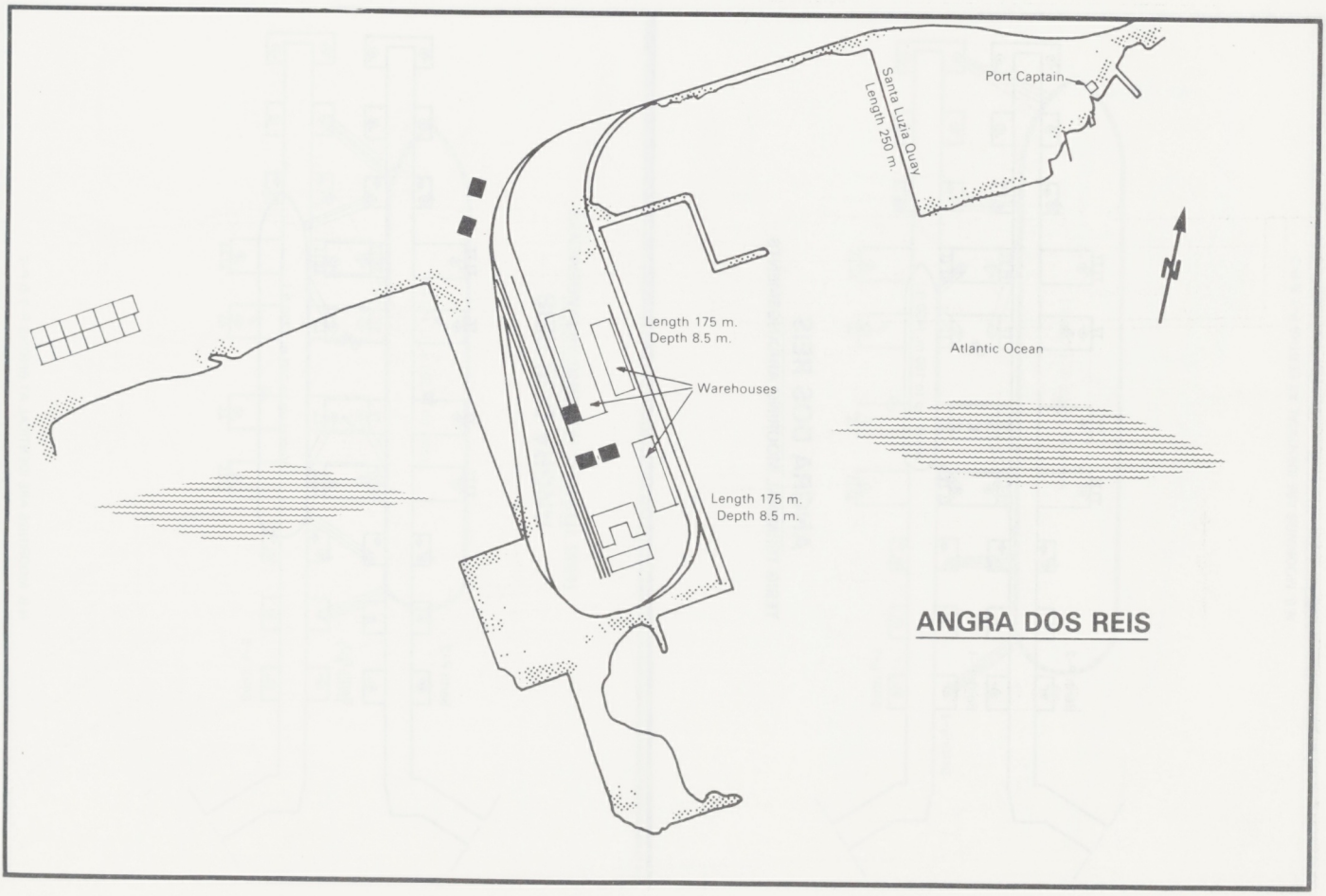
DEPTH? — not given!



ST GEORGE'S



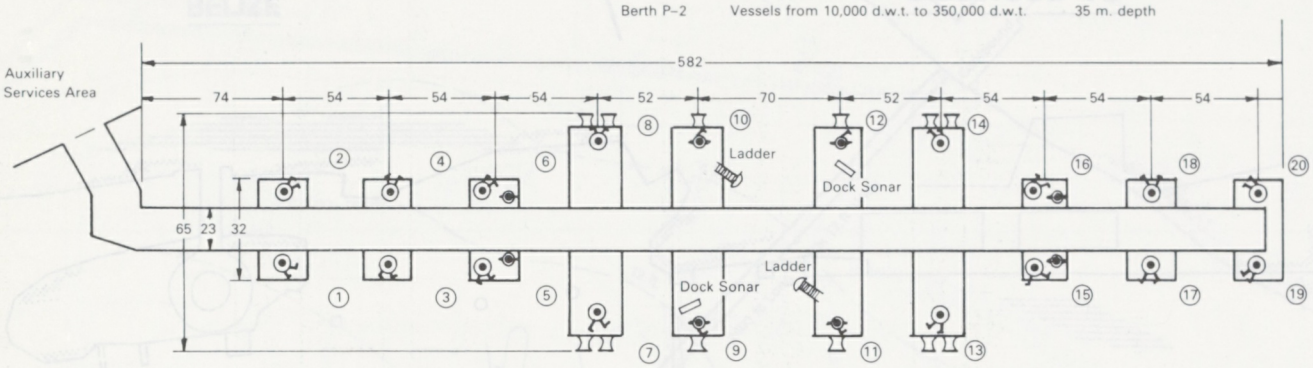
N.B. Entry to St George's Harbour restricted by draft of 30 feet.



ANGRA DOS REIS

ANGRA DOS REIS

TEBIG TERMINAL LAYOUT

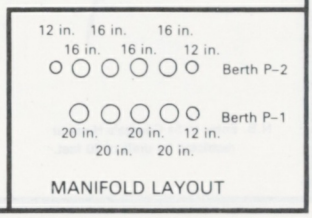


SET
S.W. – 107° – .8 knots
S.W. – 103° – 1.7 knots (Springs)
S.W. 119° – .7 knots

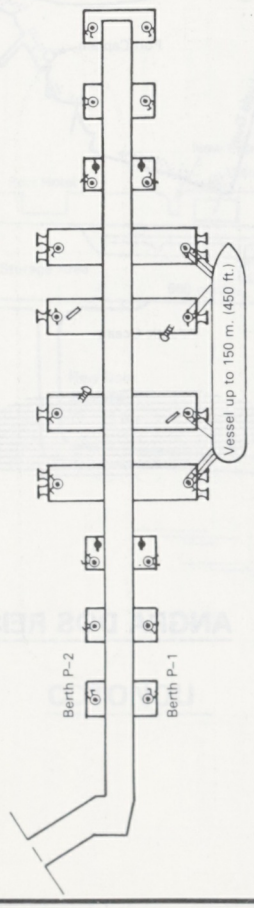
Prevailing Winds
S.W. – 240° – 20 m.p.h.
S.E. – 120° – 15 m.p.h.

Height of Loading Arms Platform above Mean Low Water Springs 7.2 m.

DIMENSIONS IN METRES ⑨ Dolphin Number

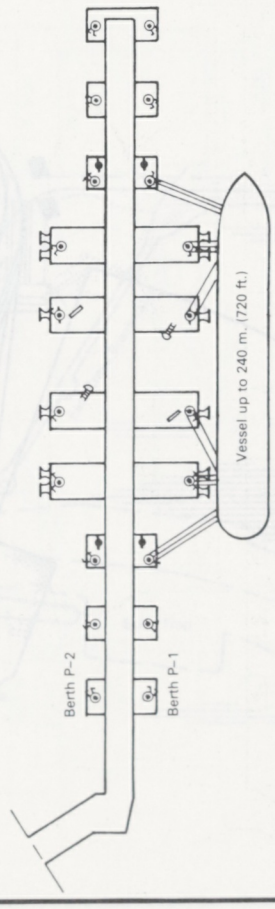


MANIFOLD LAYOUT

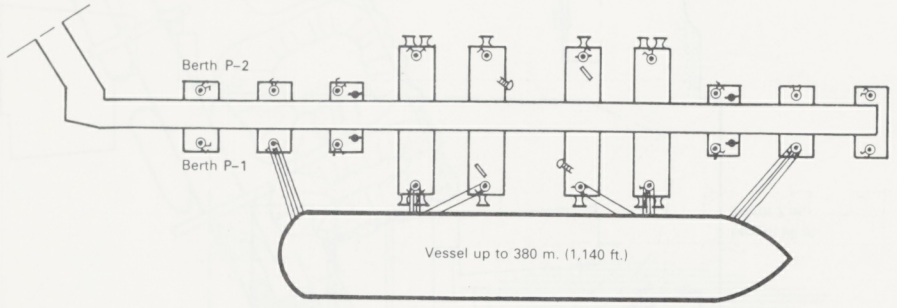


ANGRA DOS REIS

TEBIG TERMINAL MOORING ARRANGEMENTS

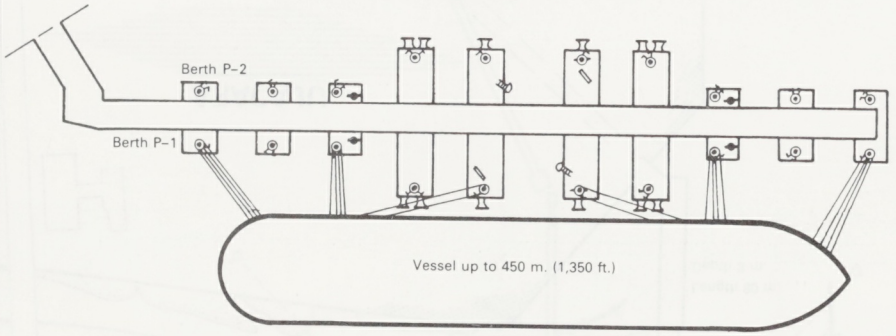


N.B. MOORINGS ARE IDENTICAL AT BERTHS P–1 & P–2

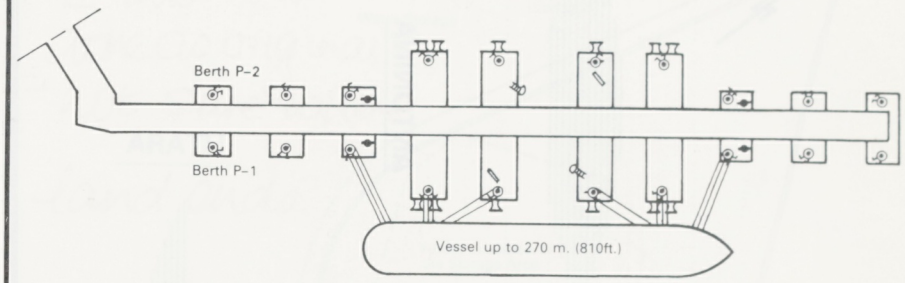


ANGRA DOS REIS

TEBIG TERMINAL MOORING ARRANGEMENTS

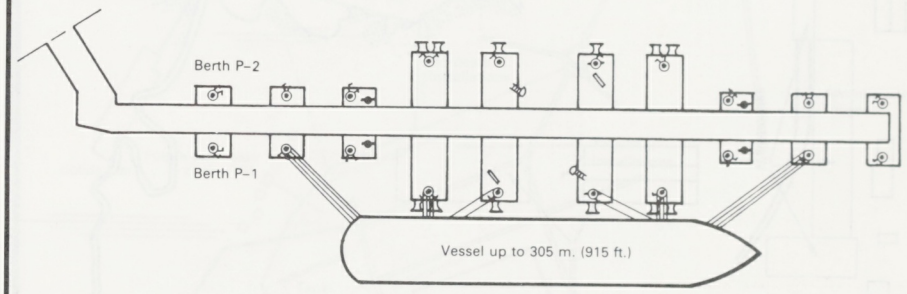


N.B. MOORINGS ARE IDENTICAL AT BERTHS P–1 & P–2

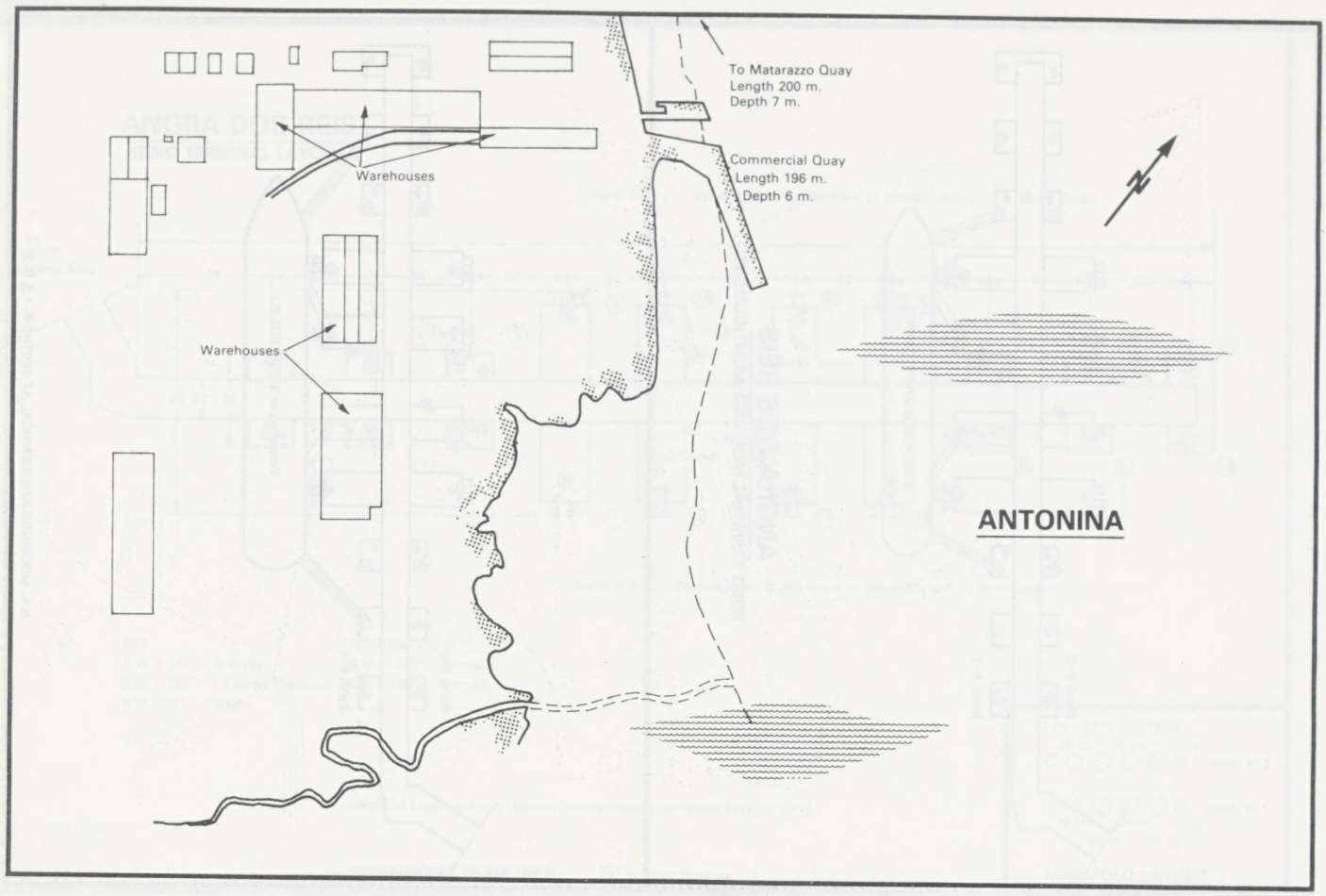


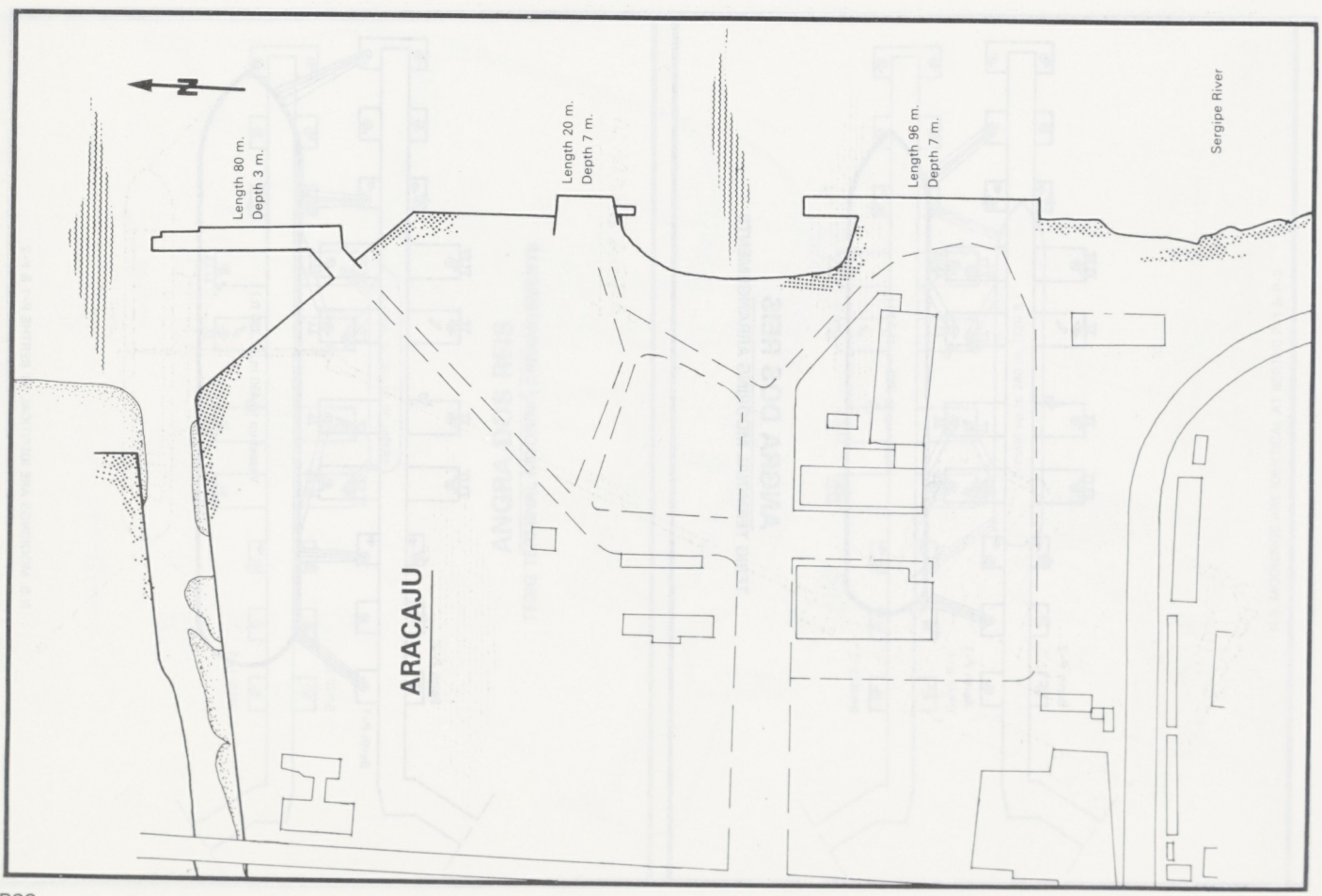
ANGRA DOS REIS

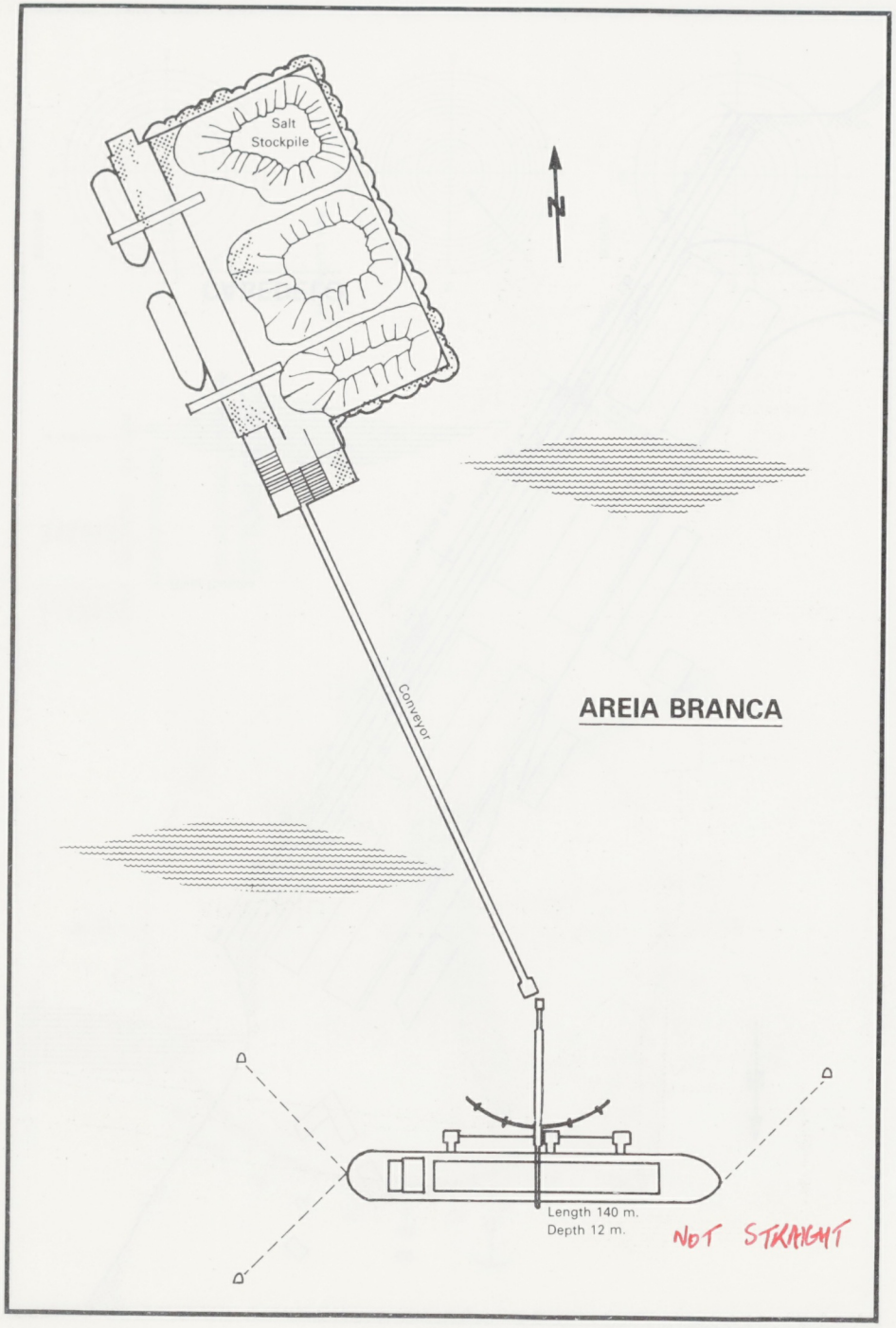
TEBIG TERMINAL MOORING ARRANGEMENTS

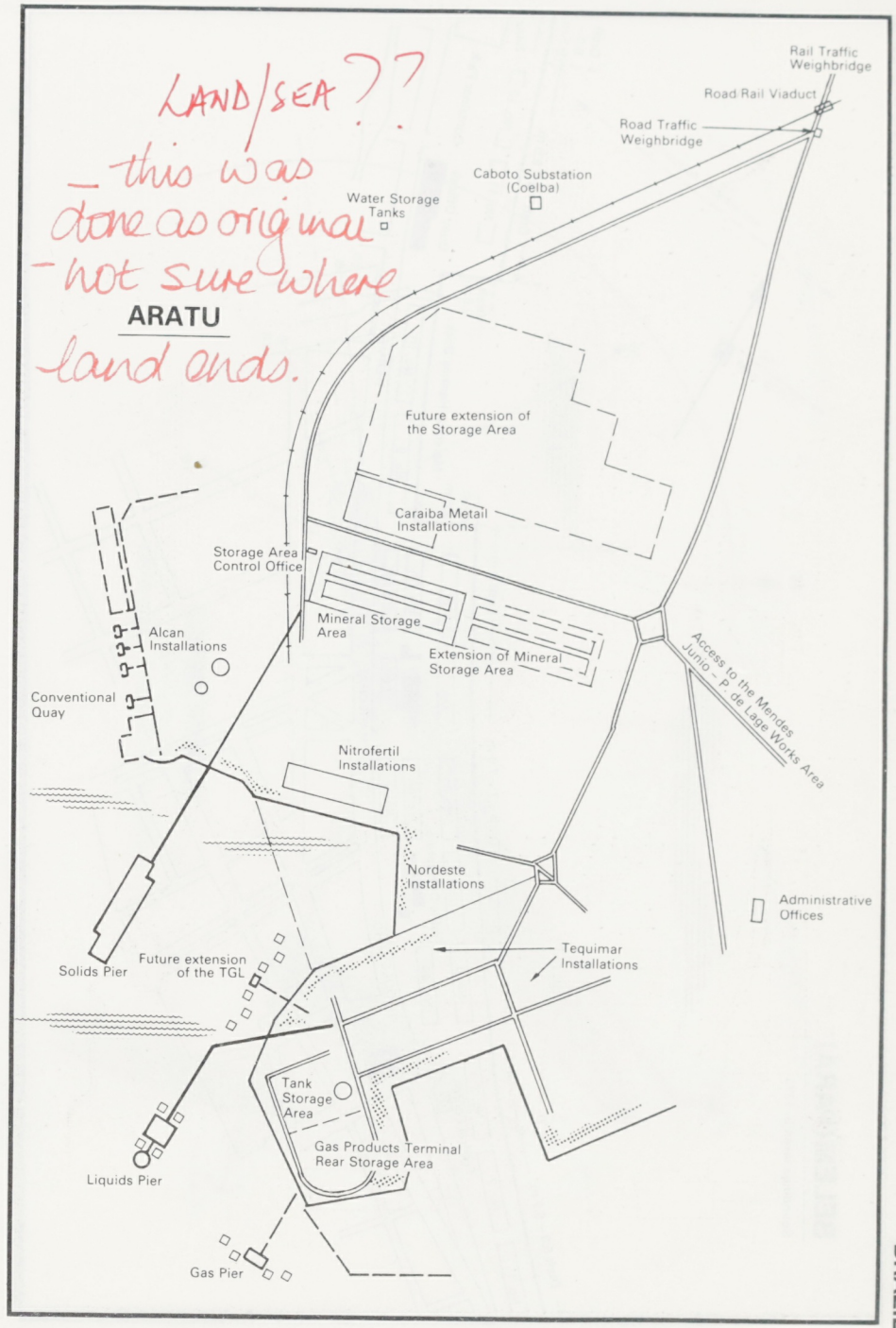


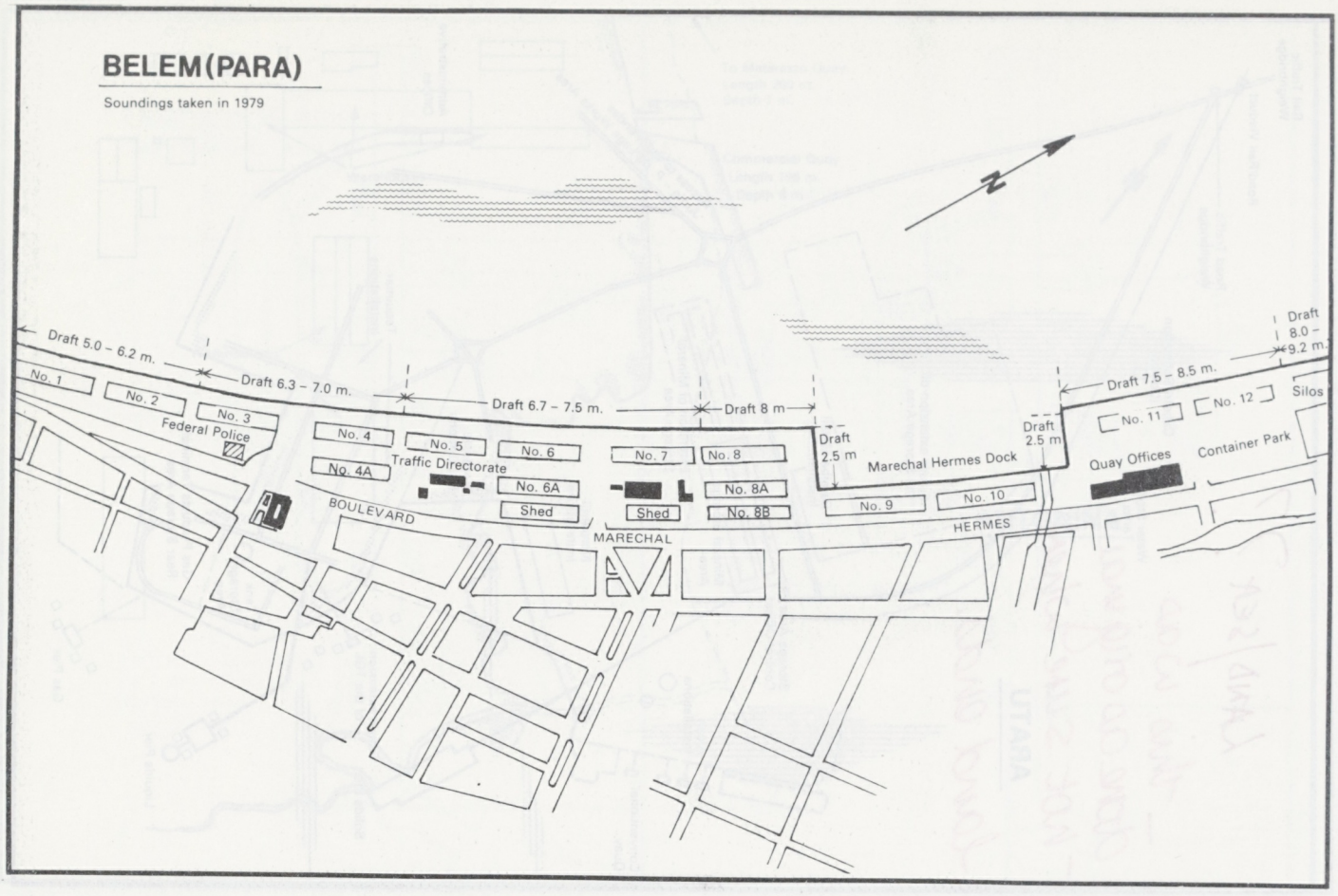
N.B. MOORINGS ARE IDENTICAL AT BERTHS P–1 & P–2

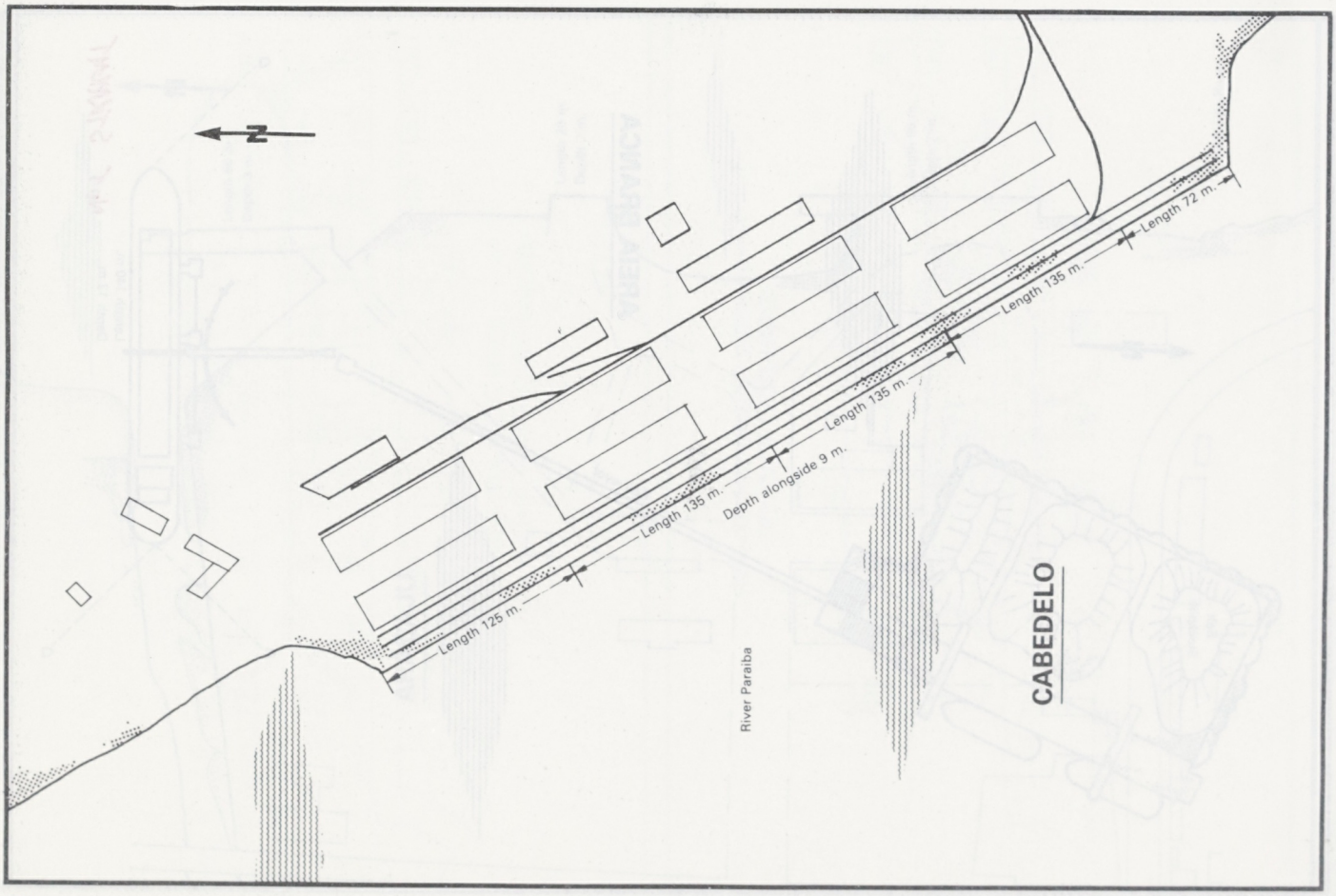

To Matarazzo Quay
Length 200 m.
Depth 7 m.
Commercial Quay
Length 196 m.
Depth 6 m.
Warehouses
Warehouses
ANTONINA

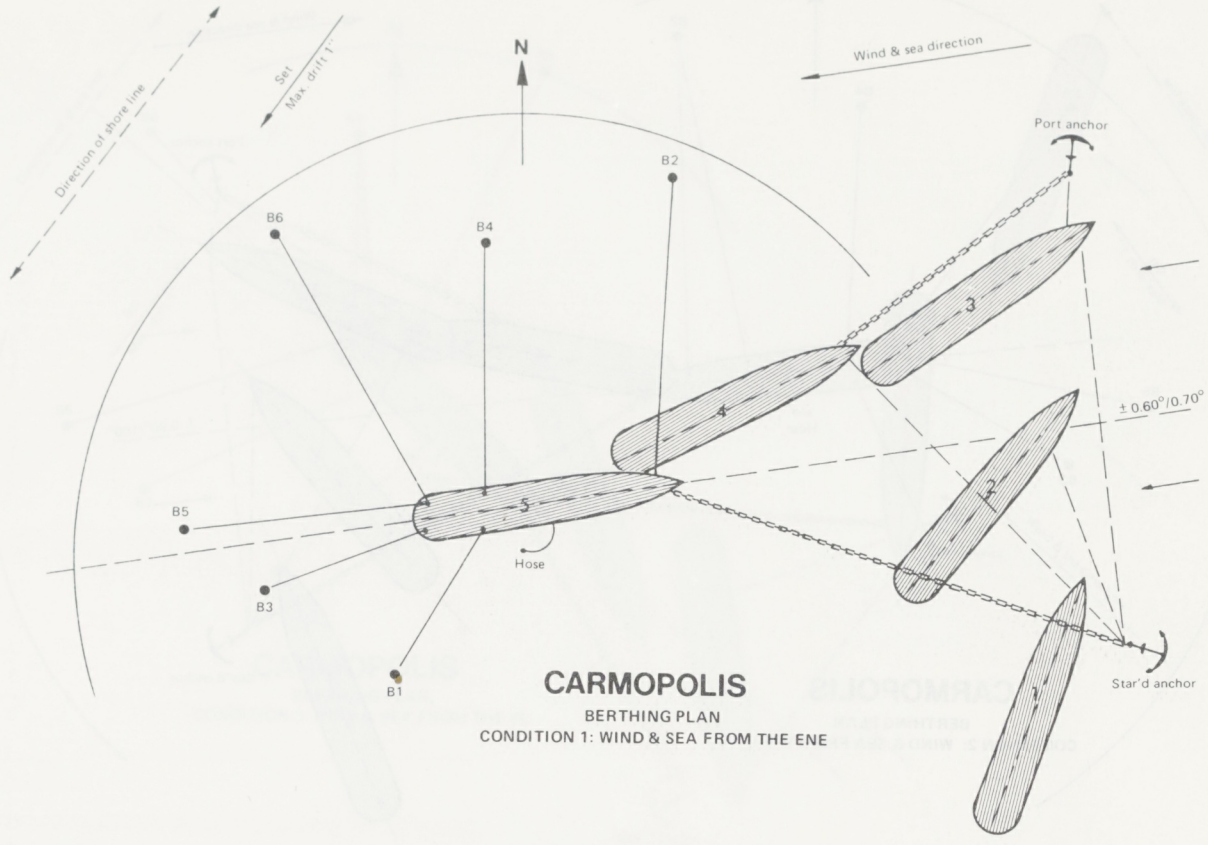

Length 80 m.
Depth 3 m.
Length 20 m.
Depth 7 m.
Length 96 m.
Depth 7 m.
Sergipe River
ARACAJU


Salt Stockpile
N
Conveyor
AREIA BRANCA
Length 140 m.
Depth 12 m.
NOT STRAIGHT


LAND/SEA??
- this was done as original
- not sure where land ends.
ARATU
Rail Traffic Weighbridge
Road Rail Viaduct
Road Traffic Weighbridge
Caboto Substation (Coelba)
Water Storage Tanks
Future extension of the Storage Area
Caraiba Metall Installations
Storage Area Control Office
Mineral Storage Area
Extension of Mineral Storage Area
Alcan Installations
Conventional Quay
Access to the Mendes Junio - P. de Lage Works Area
Nitrofertil Installations
Nordeste Installations
Administrative Offices
Solids Pier
Future extension of the TGL
Tequimar Installations
Tank Storage Area
Gas Products Terminal Rear Storage Area
Liquids Pier
Gas Pier


BELEM(PARA)
Soundings taken in 1979
N
Draft 5.0 – 6.2 m.
Draft 6.3 – 7.0 m.
Draft 6.7 – 7.5 m.
Draft 8 m
Draft 2.5 m
Draft 7.5 – 8.5 m.
Draft 8.0 – 9.2 m.
Draft 2.5 m
No. 1
No. 2
No. 3
Federal Police
No. 4
No. 4A
No. 5
Traffic Directorate
No. 6
No. 6A
Shed
No. 7
No. 8
Shed
No. 8A
No. 8B
No. 9
No. 10
Marechal Hermes Dock
No. 11
No. 12
Quay Offices
Container Park
Silos
BOULEVARD
MARECHAL
HERMES

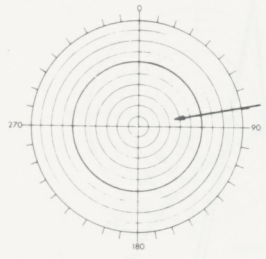

N
Length 125 m.
Length 135 m.
Length 135 m.
Depth alongside 9 m.
Length 135 m.
Length 72 m.
River Paraiba
CABEDELO



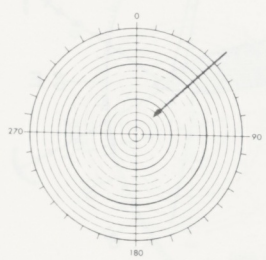
CARMOPOLIS

BERTHING PLAN

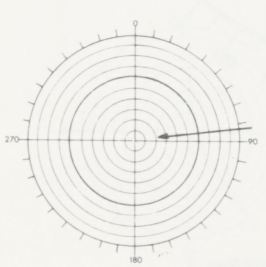
CONDITION 1: WIND & SEA FROM THE ENE



WINDS

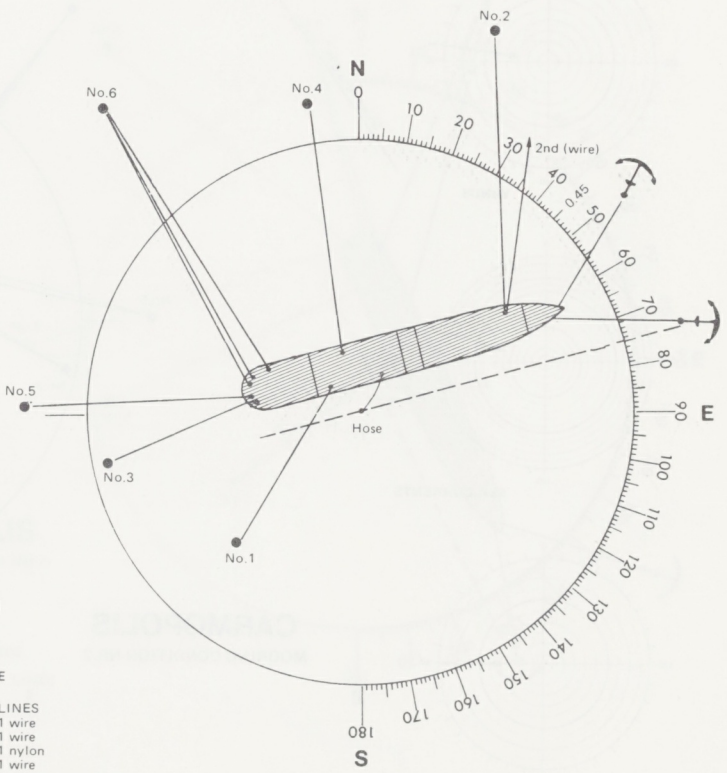


SEA CURRENTS



WAVES

Shore runs 035°



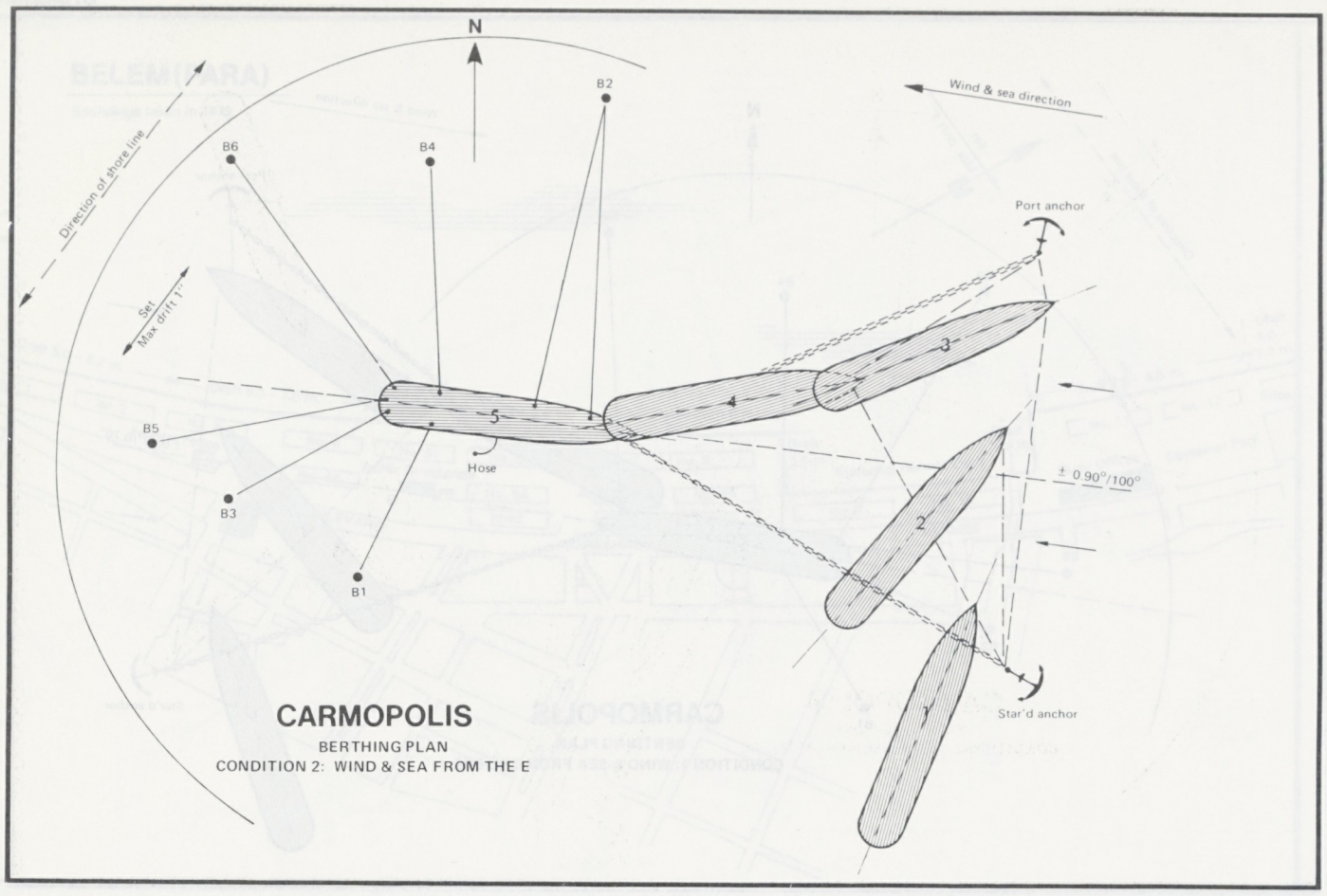
CARMOPOLIS

MOORING CONDITION NR.1

MOORING SEQUENCE

BUOY NO	SEQUENCE	LINES
1	4th	1 wire
2	1st	1 wire
3	5th	1 nylon
4	3rd	1 wire
5	6th	1 wire
6	2nd	3 nylon

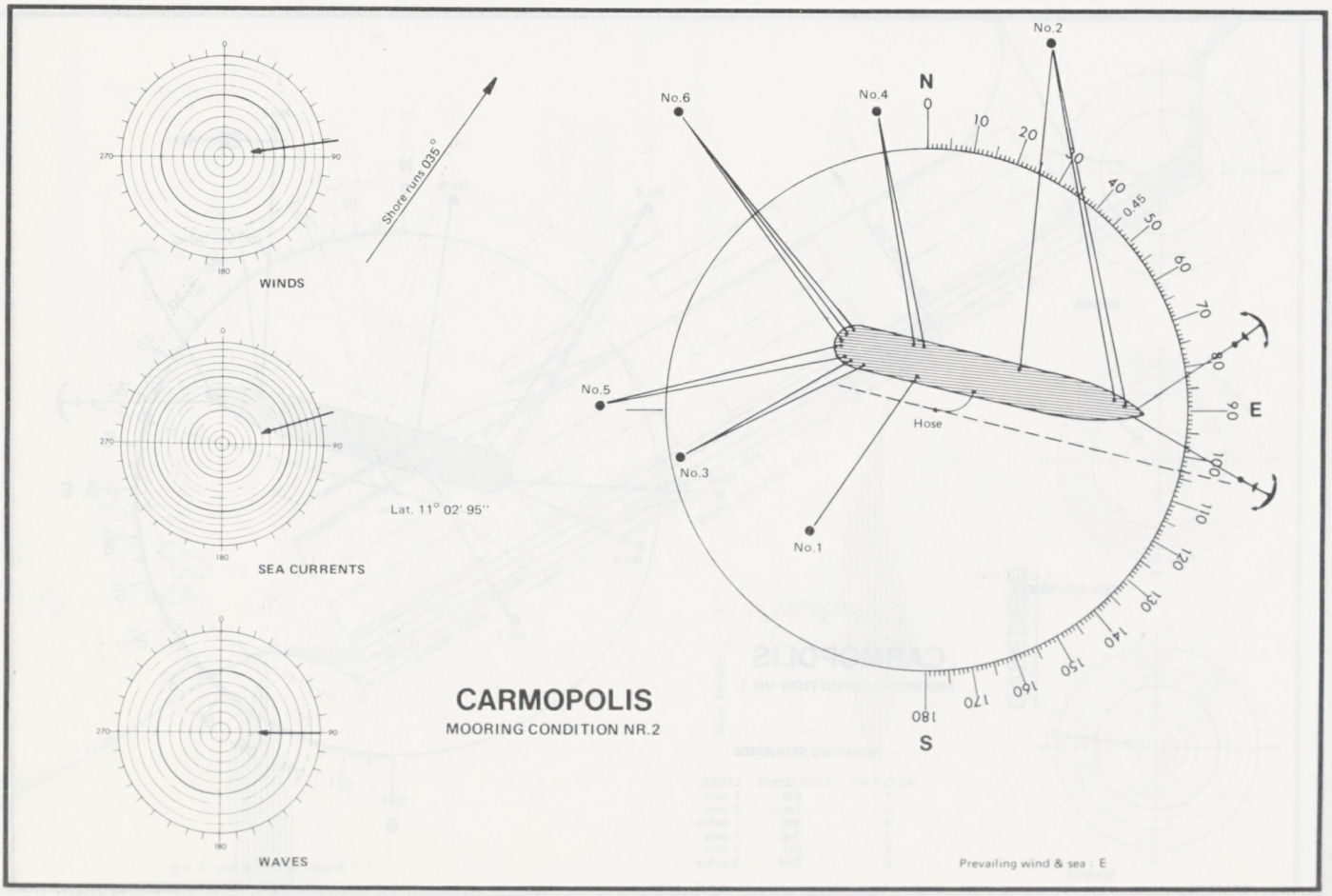
Prevailing wind & sea : E N E



CARMOPOLIS

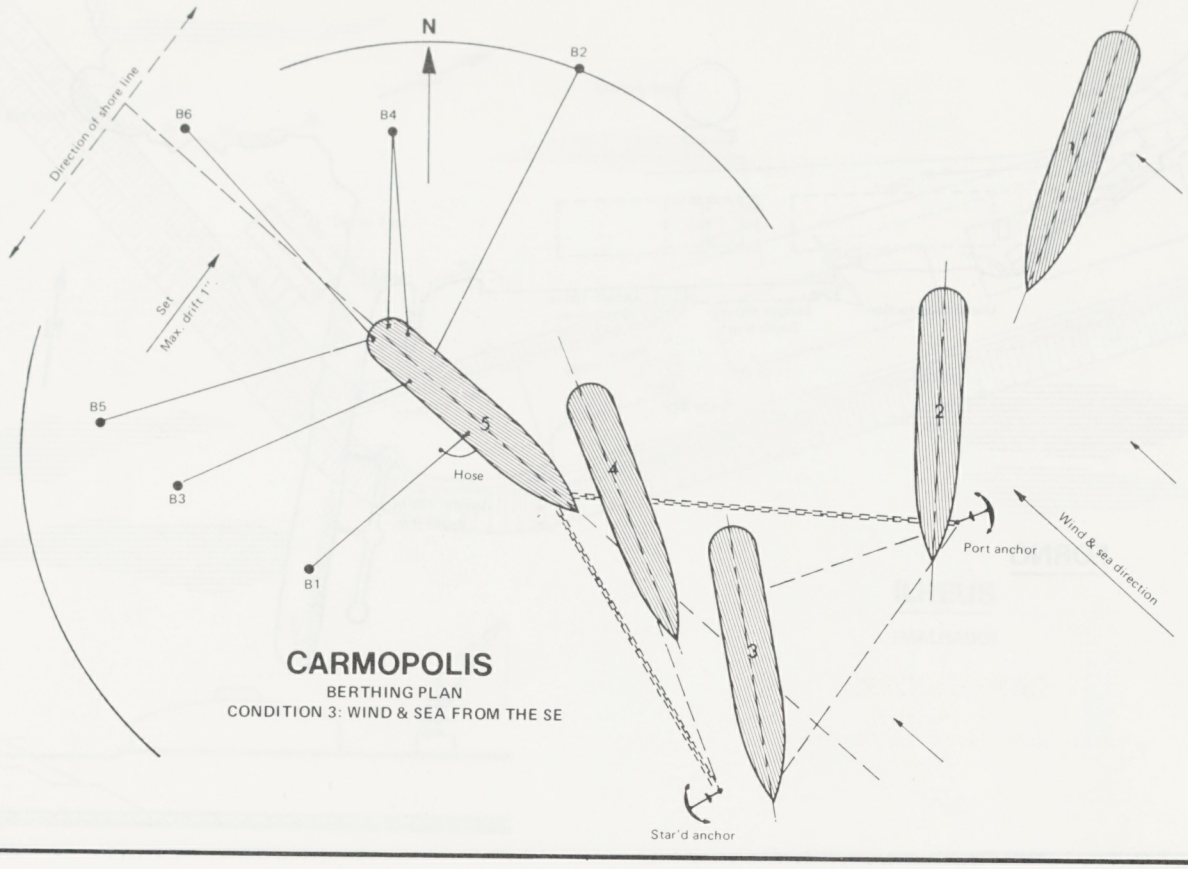
BERTHING PLAN

CONDITION 2: WIND & SEA FROM THE E



CARMOPOLIS

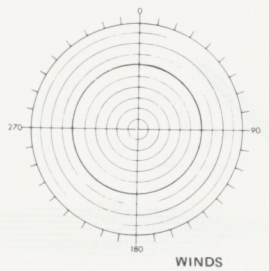
MOORING CONDITION NR.2

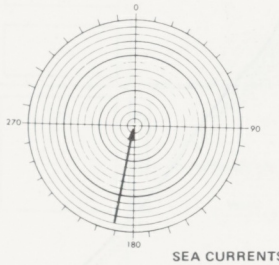


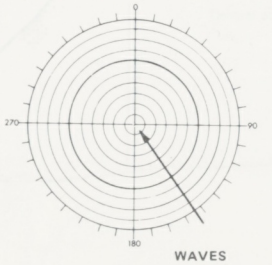
CARMOPOLIS

BERTHING PLAN

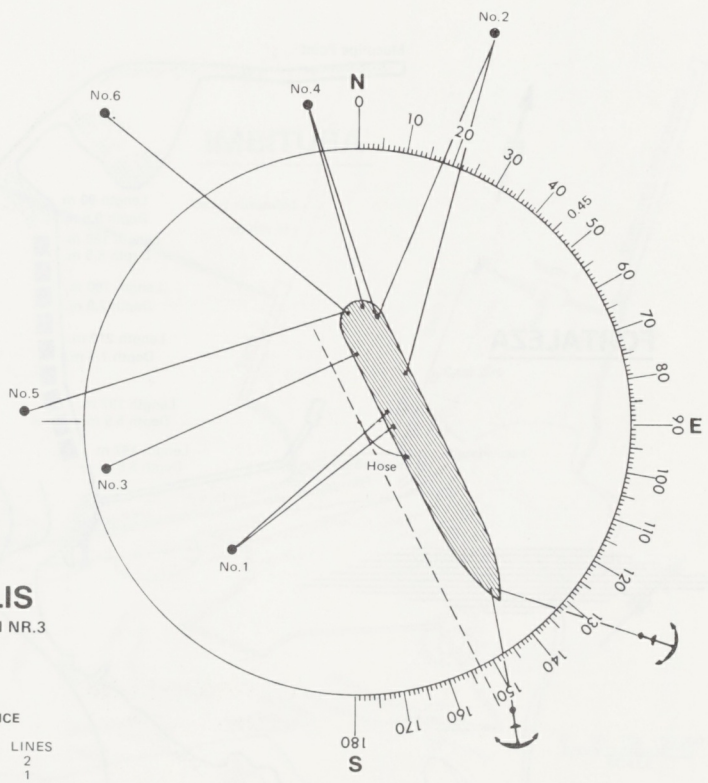
CONDITION 3: WIND & SEA FROM THE SE







Shore runs 035°



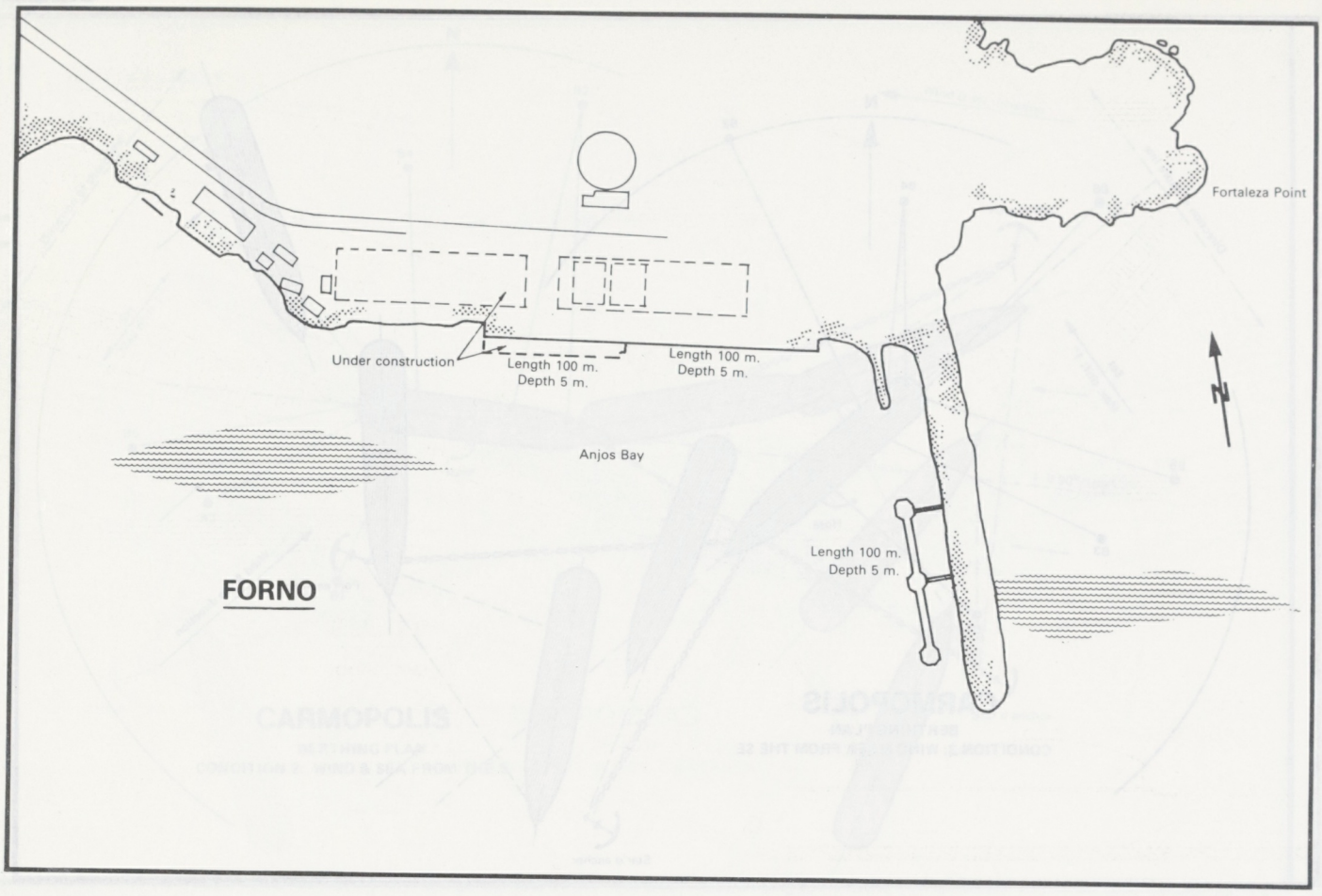
CARMOPOLIS

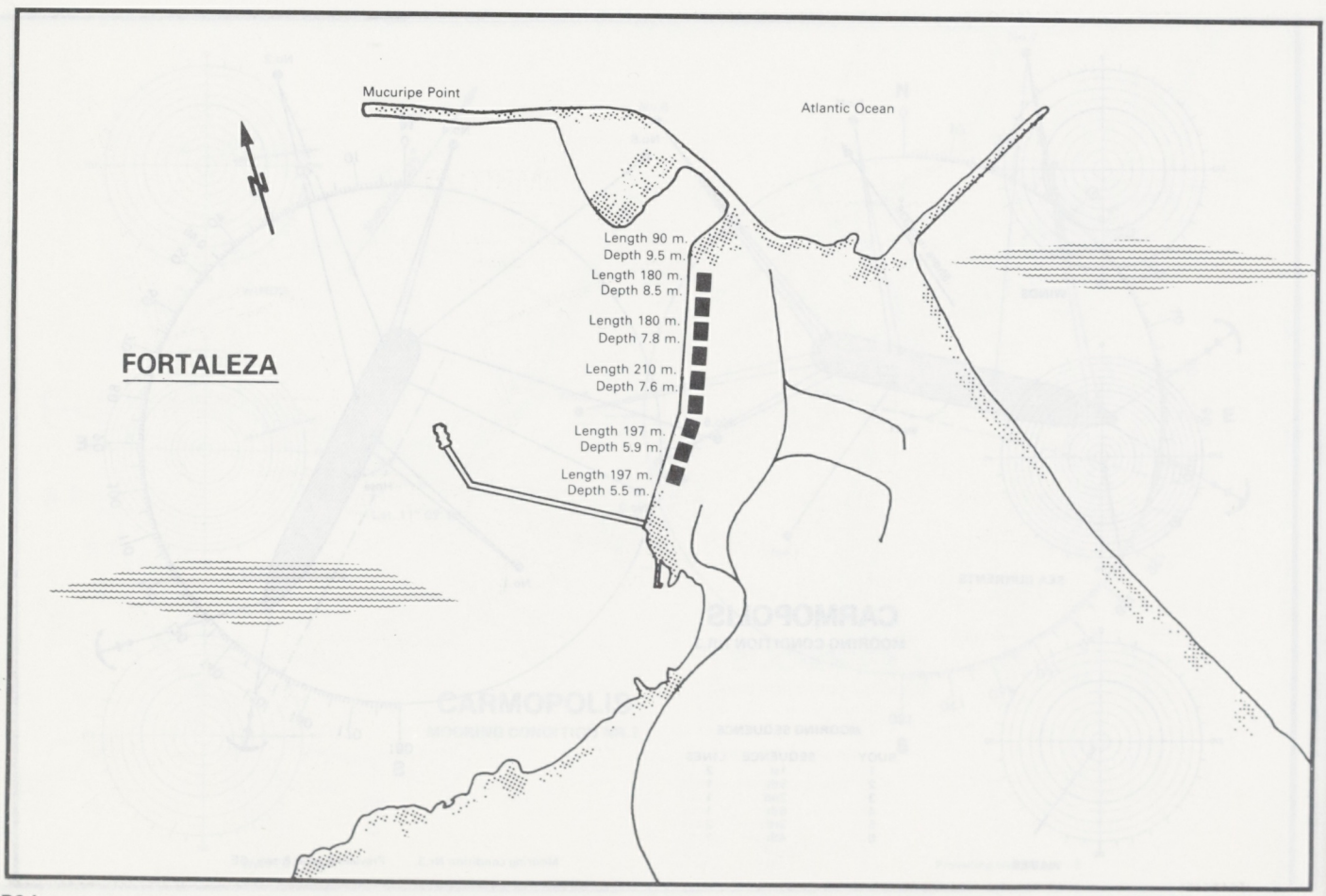
MOORING CONDITION NR.3

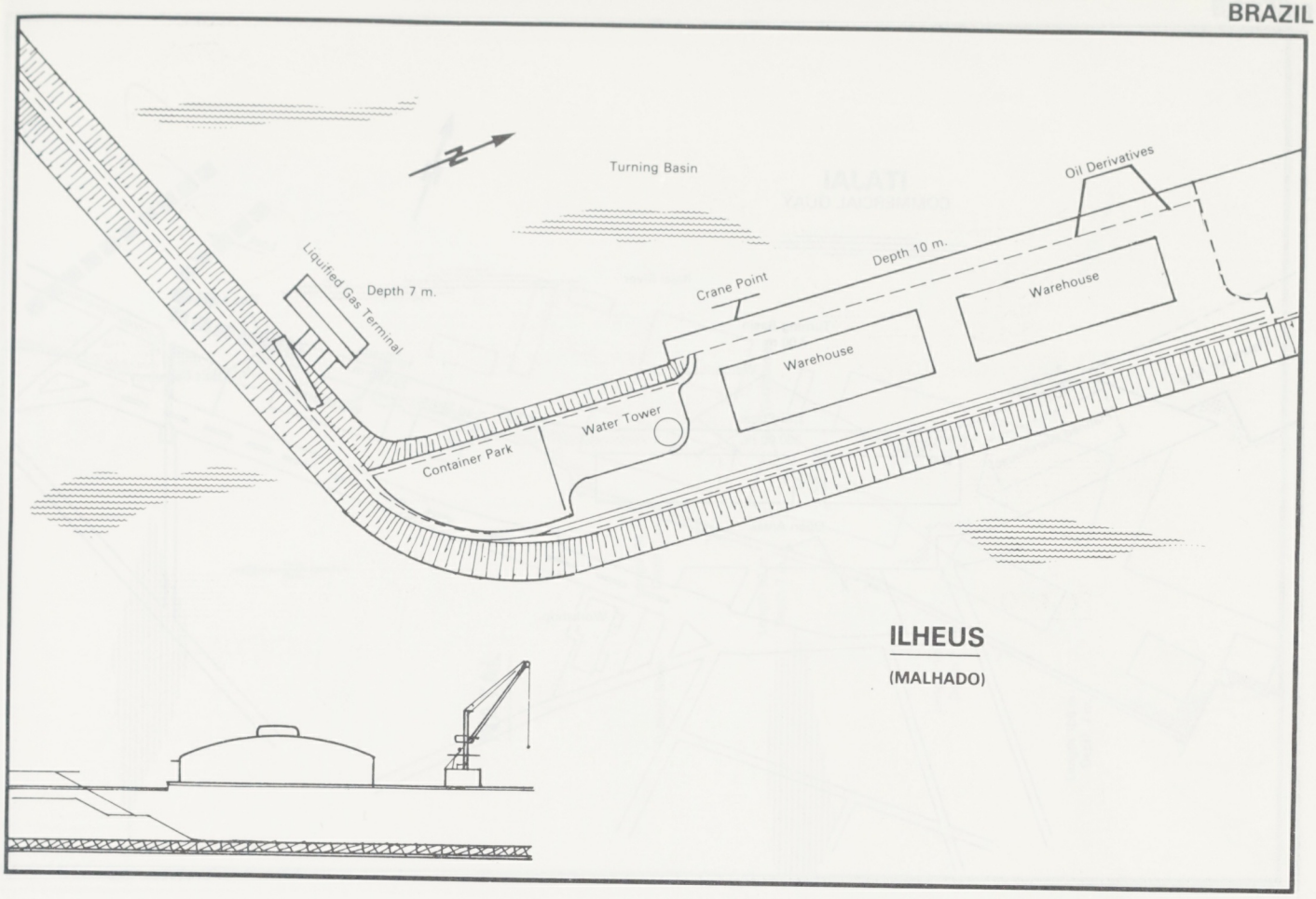
MOORING SEQUENCE

BUOY	SEQUENCE	LINES
1	1st	2
2	5th	1
3	2nd	1
4	6th	1
5	3rd	2
6	4th	1

Mooring condition Nr.3. Prevailing wind & sea : SE

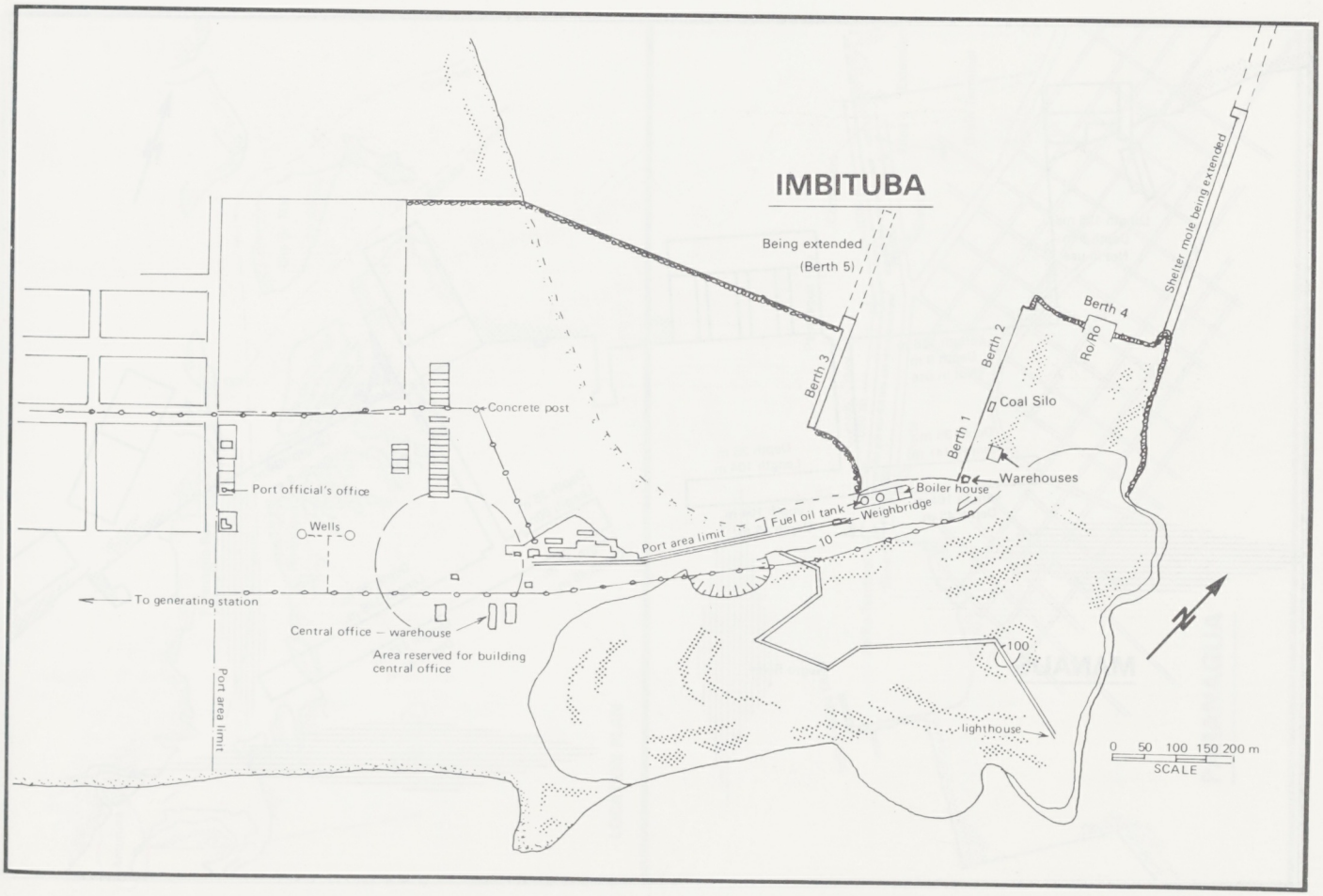

Fortaleza Point
Under construction
Length 100 m.
Depth 5 m.
Length 100 m.
Depth 5 m.
Anjos Bay
Length 100 m.
Depth 5 m.
FORNO

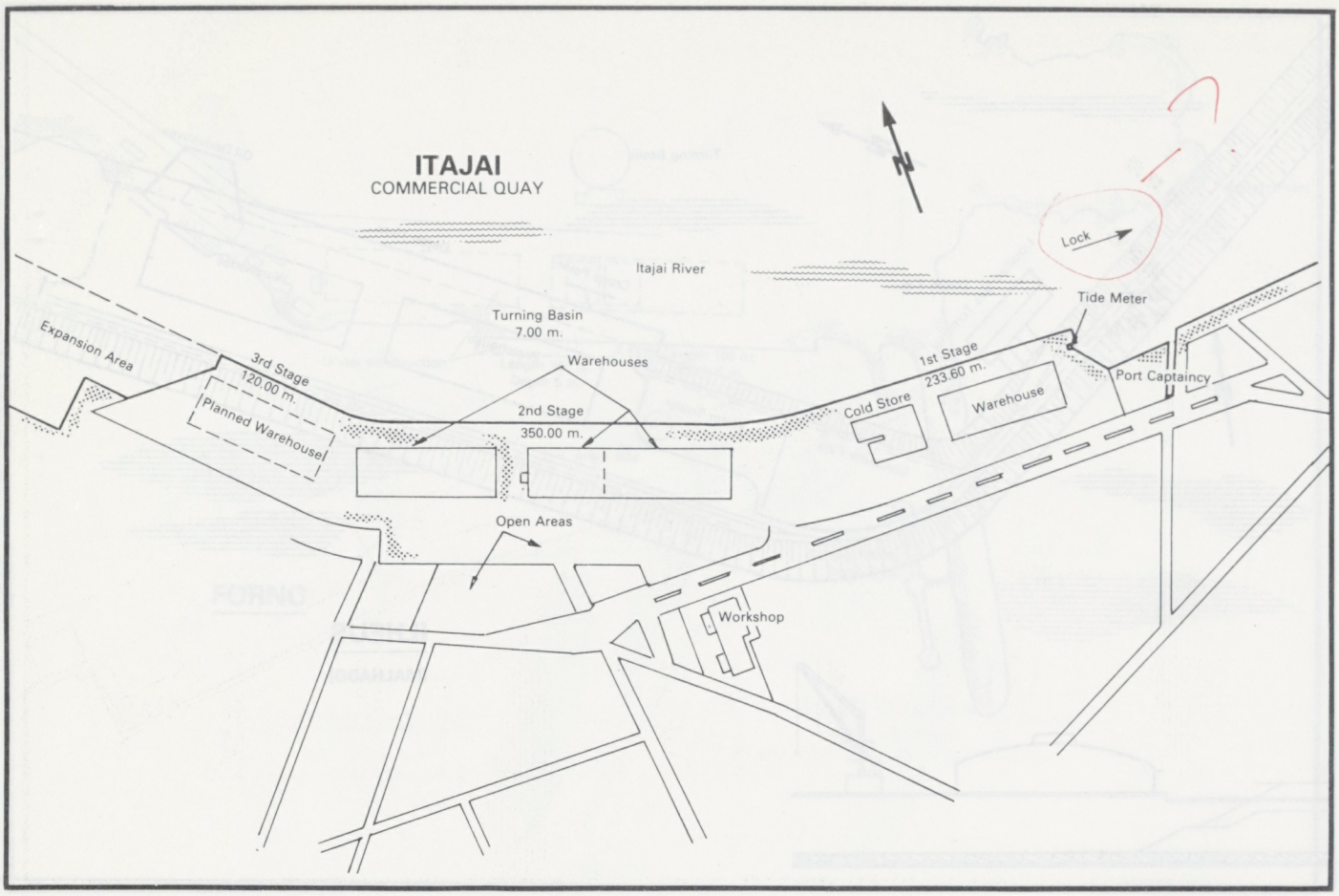

Mucuripe Point
Atlantic Ocean
Length 90 m.
Depth 9.5 m.
Length 180 m.
Depth 8.5 m.
Length 180 m.
Depth 7.8 m.
Length 210 m.
Depth 7.6 m.
Length 197 m.
Depth 5.9 m.
Length 197 m.
Depth 5.5 m.
FORTALEZA

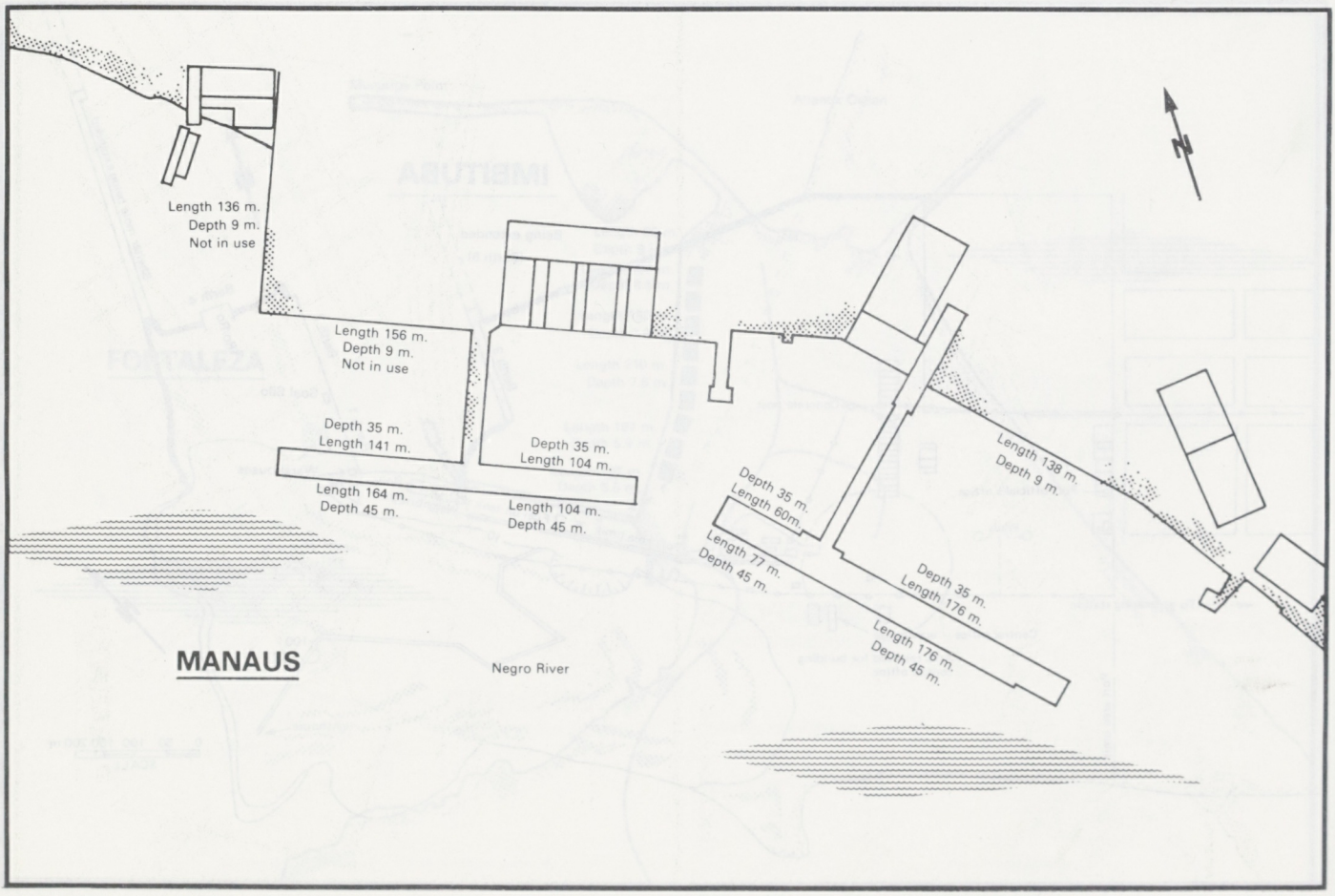


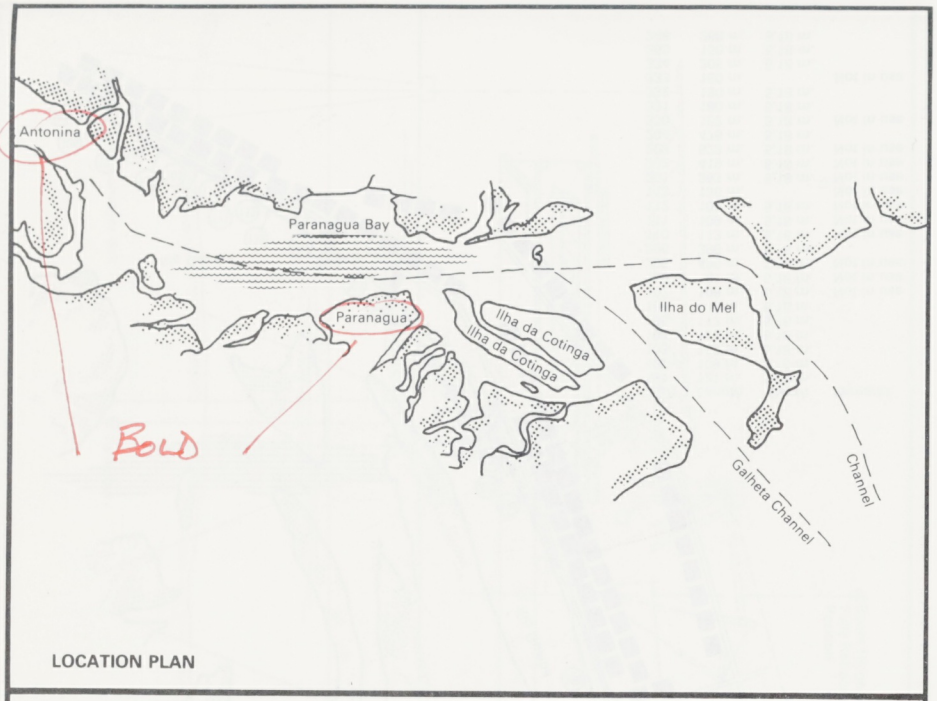
ILHEUS

(MALHADO)

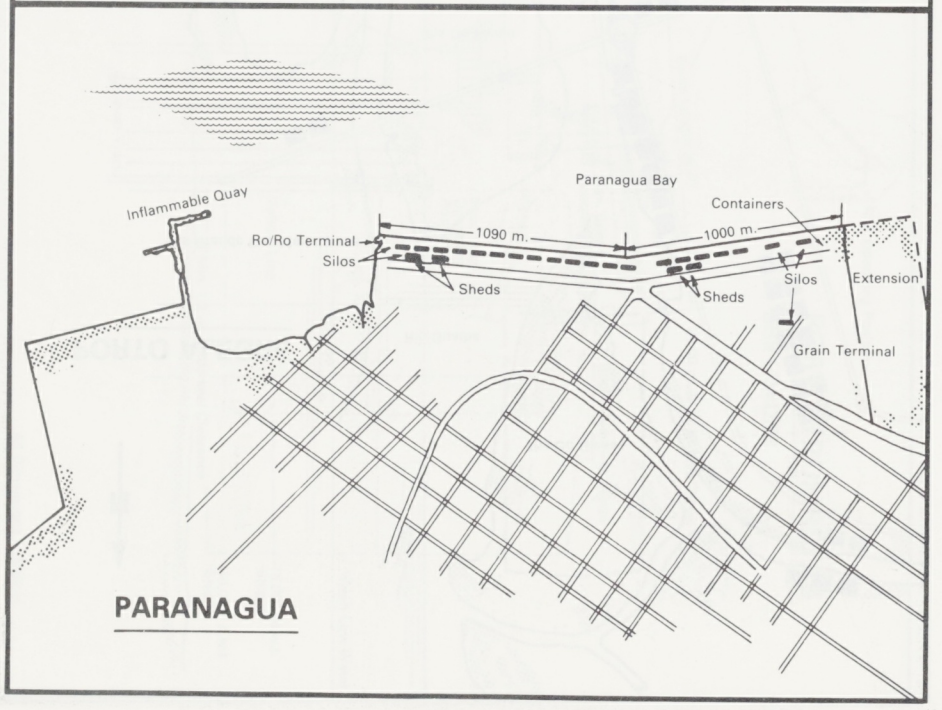



ITAJAI
COMMERCIAL QUAY
Lock
Itajai River
Tide Meter
Turning Basin
7.00 m.
Expansion Area
3rd Stage
120.00 m.
Planned Warehouse
Warehouses
2nd Stage
350.00 m.
1st Stage
233.60 m.
Cold Store
Warehouse
Port Captaincy
Open Areas
Workshop

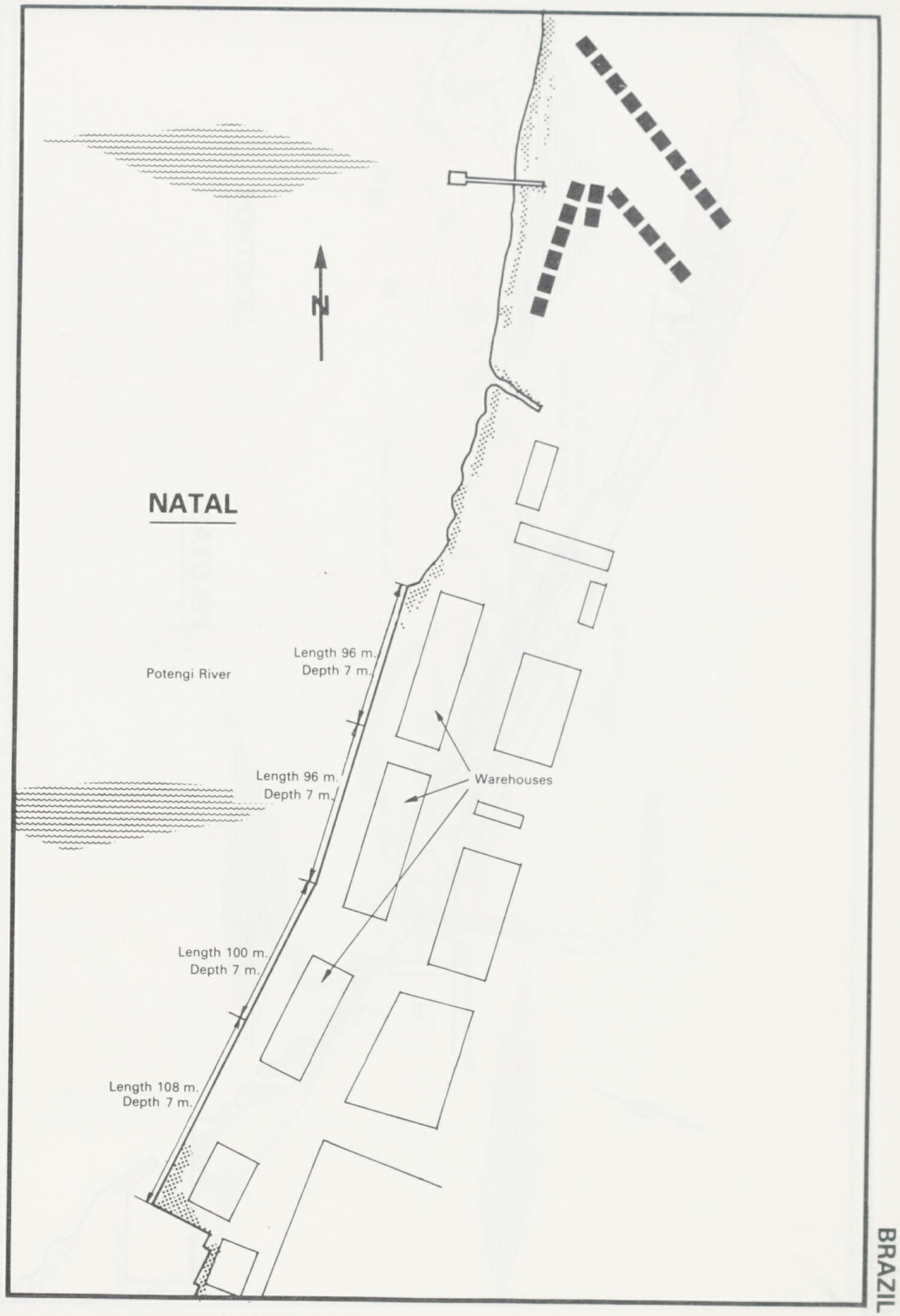

Length 136 m.
Depth 9 m.
Not in use
Length 156 m.
Depth 9 m.
Not in use
Depth 35 m.
Length 141 m.
Depth 35 m.
Length 104 m.
Length 164 m.
Depth 45 m.
Length 104 m.
Depth 45 m.
Depth 35 m.
Length 60m.
Length 77 m.
Depth 45 m.
Length 138 m.
Depth 9 m.
Depth 35 m.
Length 176 m.
Length 176 m.
Depth 45 m.
MANAUS
Negro River



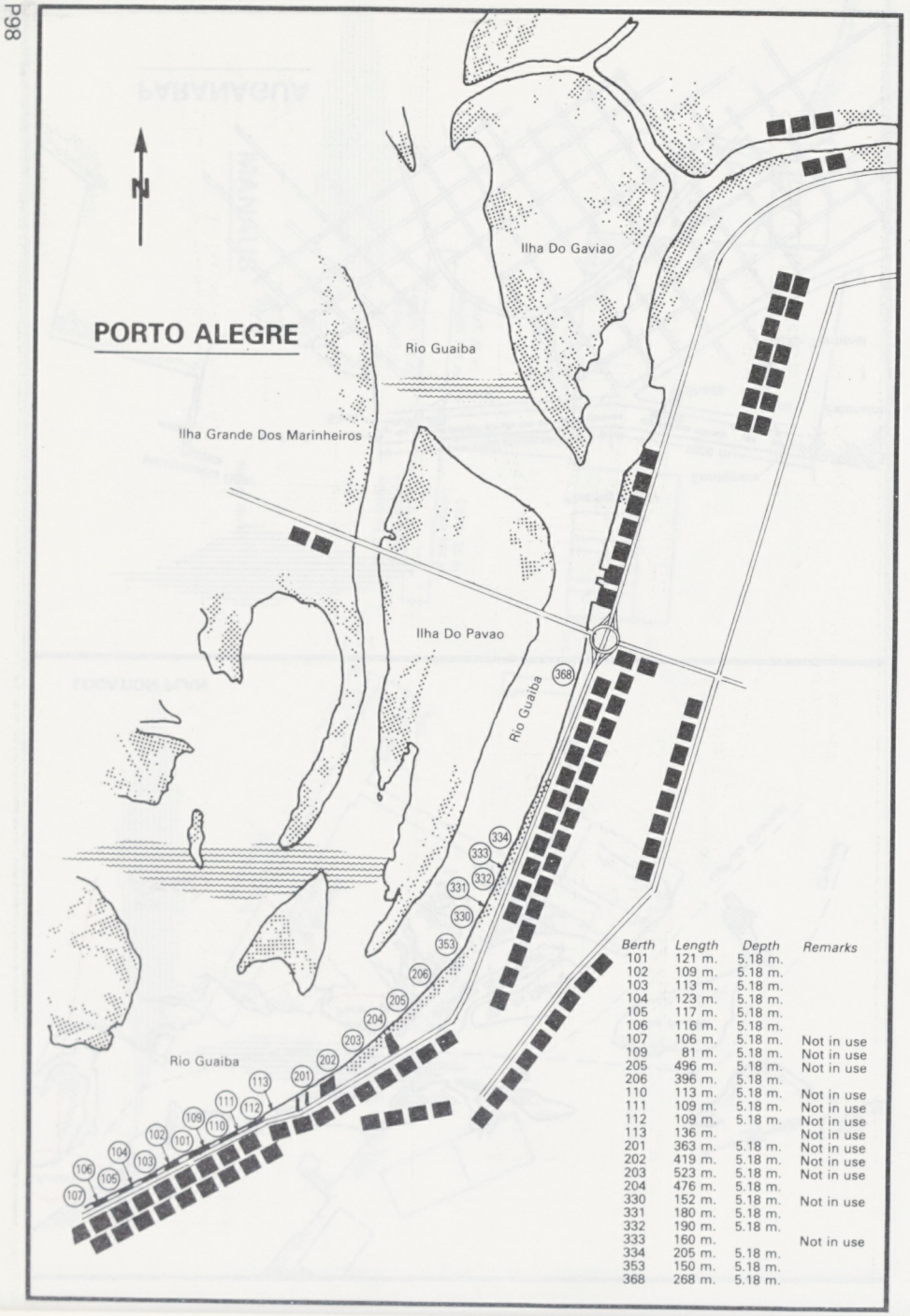
LOCATION PLAN



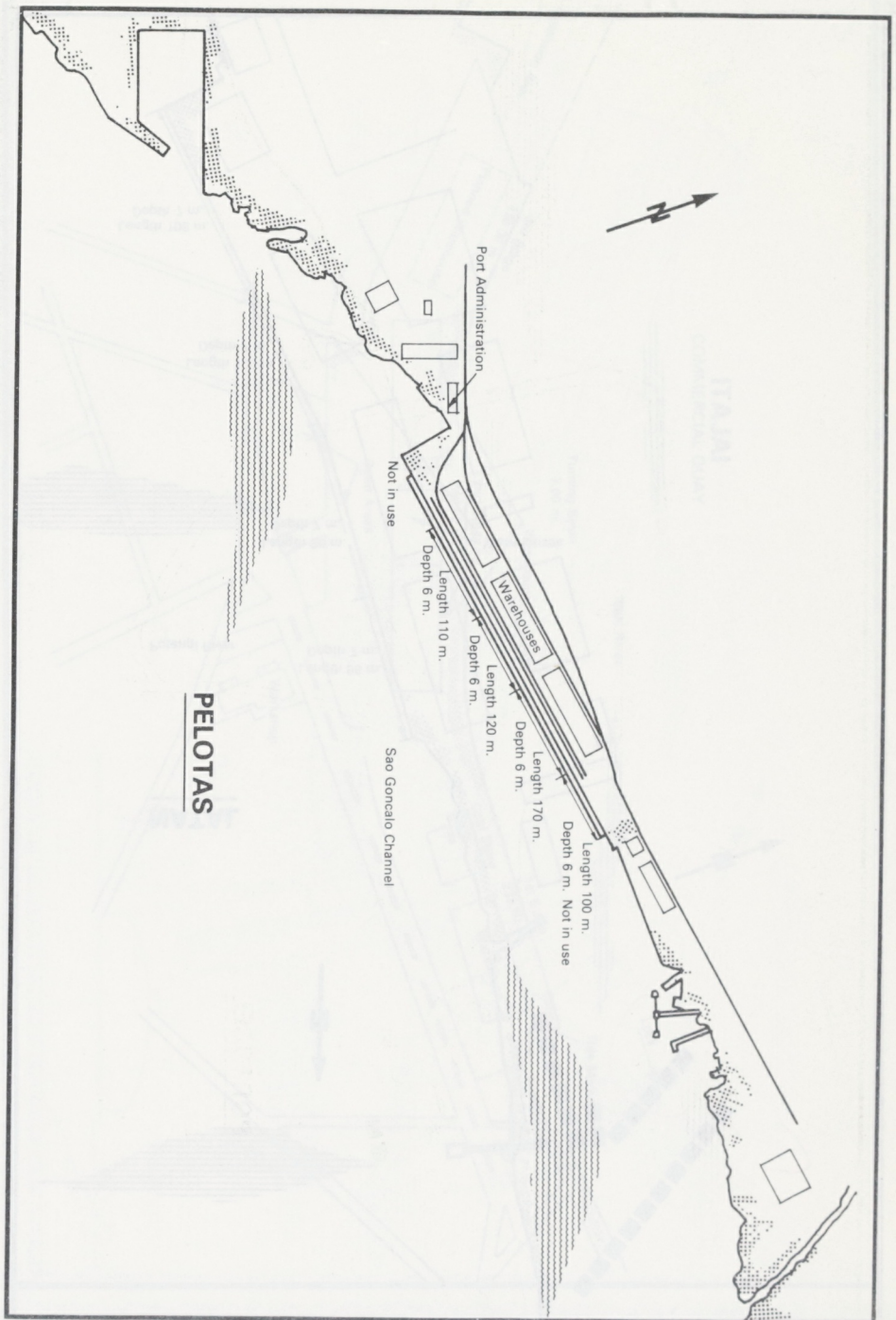
PARANAGUA

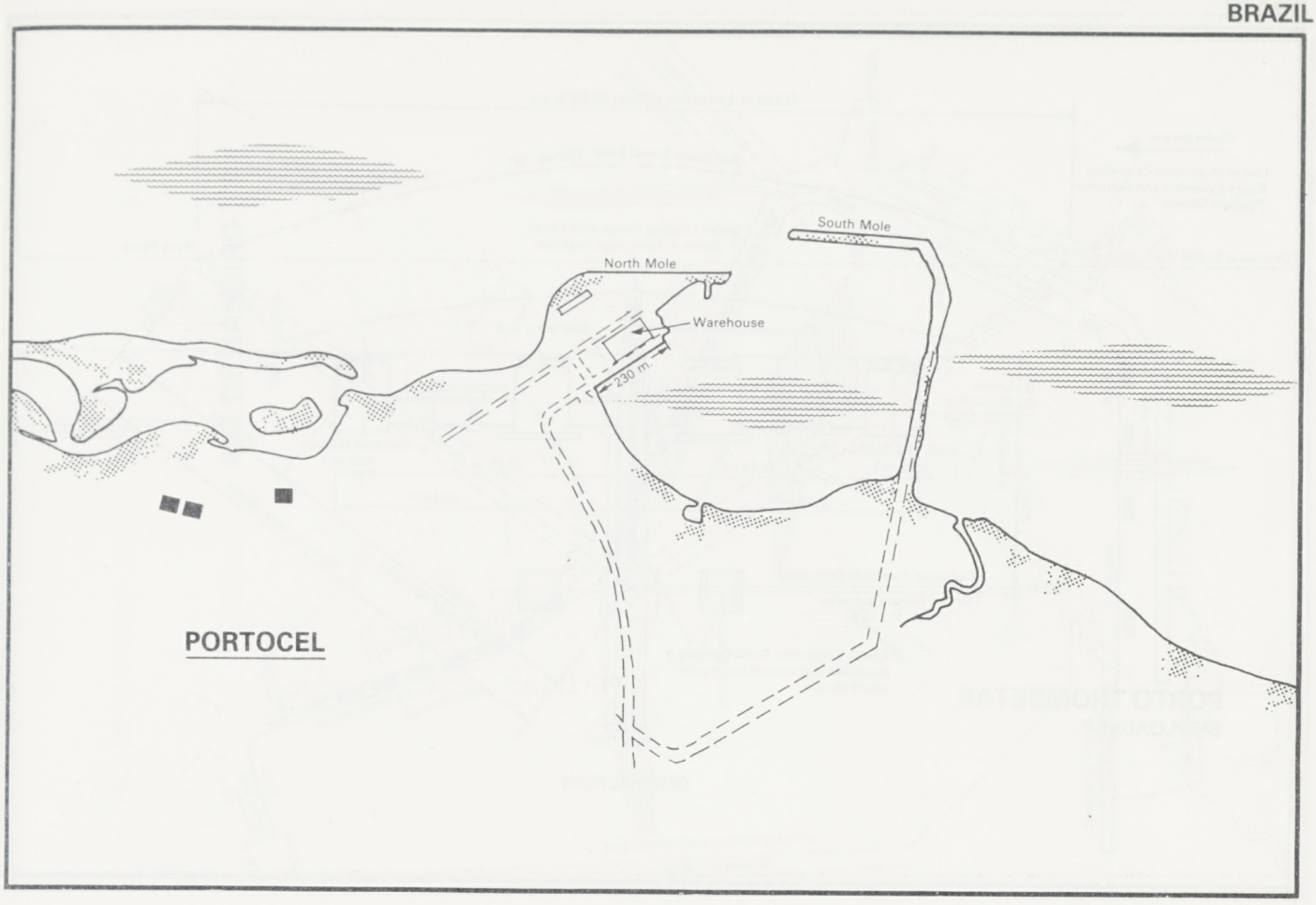


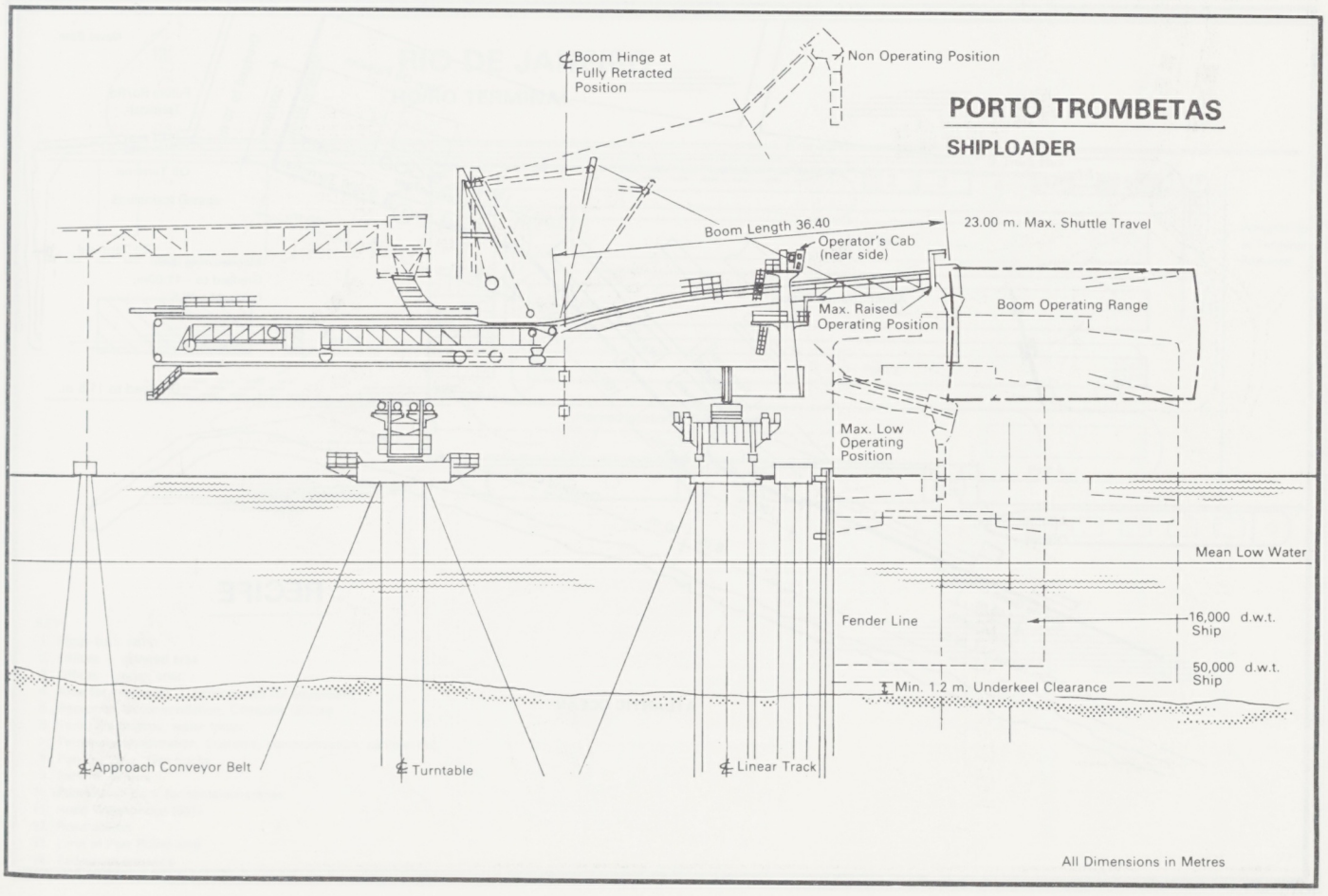
BRAZIL

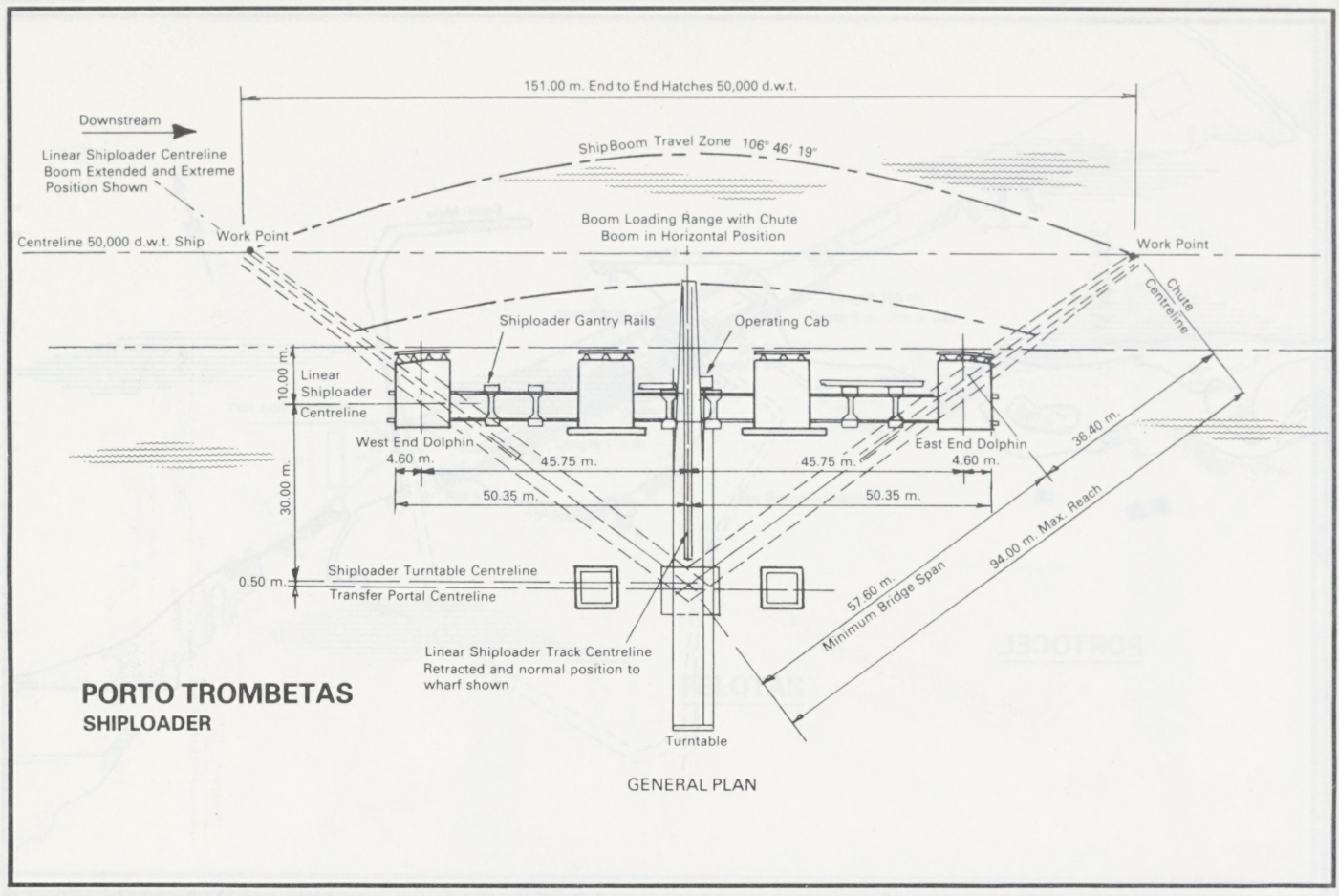


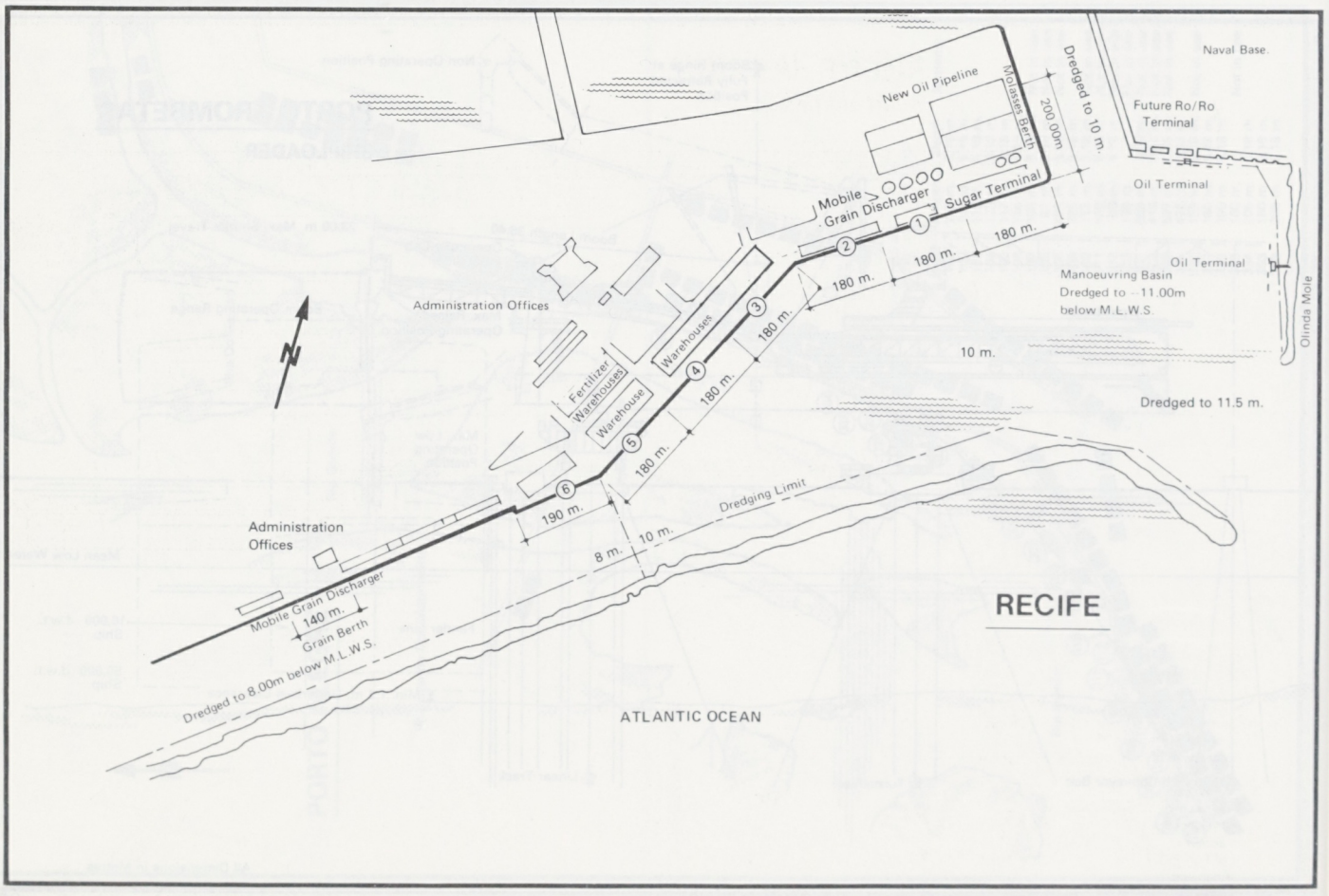
Berth	Length	Depth	Remarks
101	121 m.	5.18 m.	
102	109 m.	5.18 m.	
103	113 m.	5.18 m.	
104	123 m.	5.18 m.	
105	117 m.	5.18 m.	
106	116 m.	5.18 m.	
107	106 m.	5.18 m.	Not in use
109	81 m.	5.18 m.	Not in use
205	496 m.	5.18 m.	Not in use
206	396 m.	5.18 m.	
110	113 m.	5.18 m.	Not in use
111	109 m.	5.18 m.	Not in use
112	109 m.	5.18 m.	Not in use
113	136 m.		Not in use
201	363 m.	5.18 m.	Not in use
202	419 m.	5.18 m.	Not in use
203	523 m.	5.18 m.	Not in use
204	476 m.	5.18 m.	
330	152 m.	5.18 m.	Not in use
331	180 m.	5.18 m.	
332	190 m.	5.18 m.	
333	160 m.		Not in use
334	205 m.	5.18 m.	
353	150 m.	5.18 m.	
368	268 m.	5.18 m.	

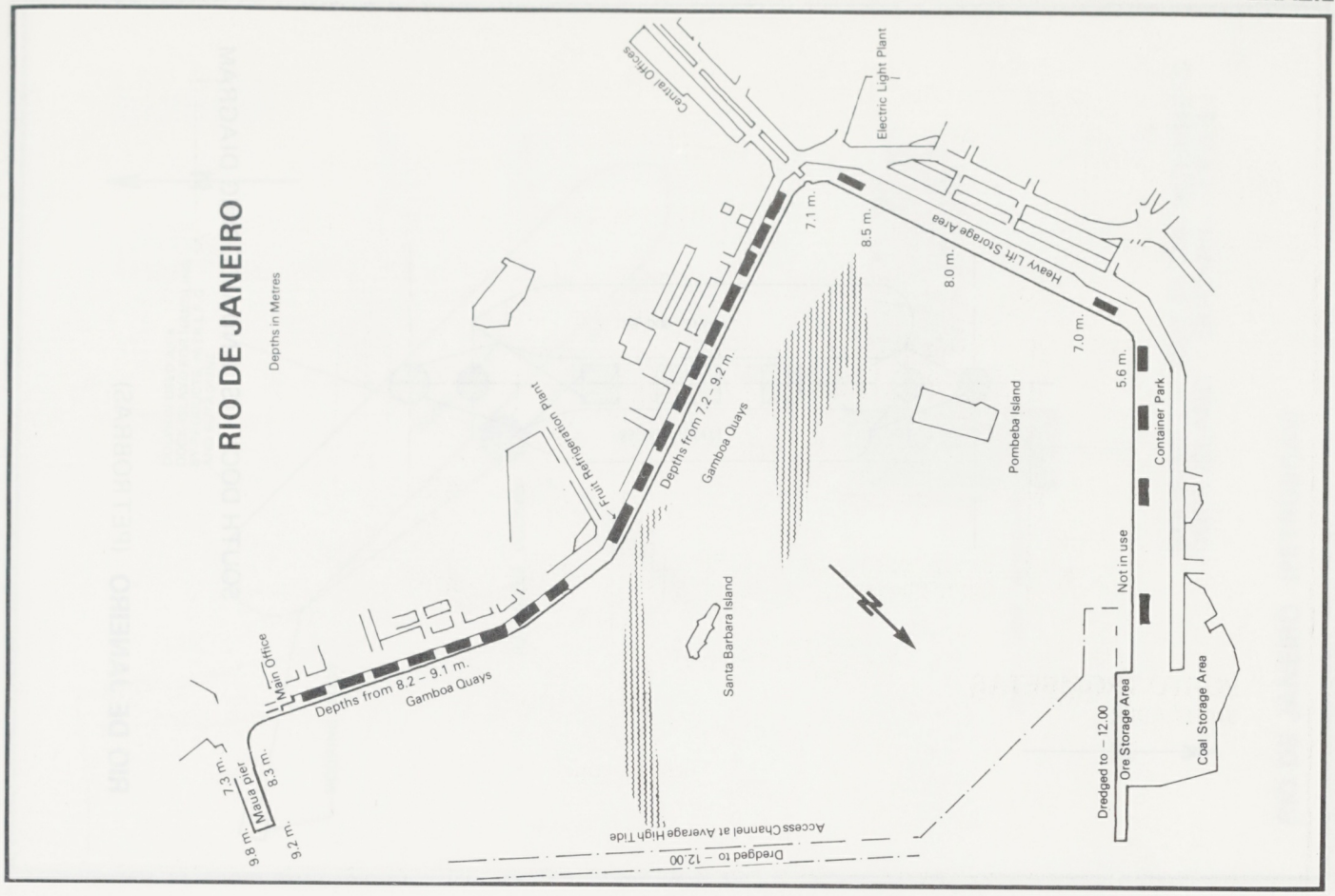


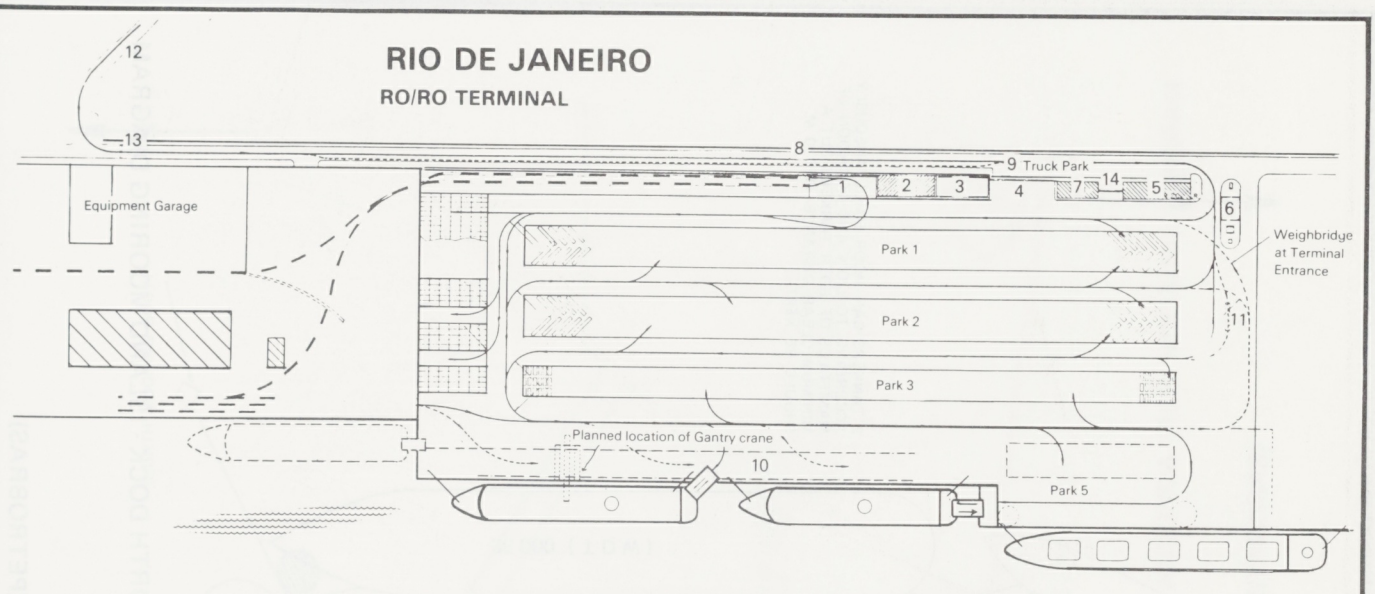

South Mole
North Mole
Warehouse
230 m
PORTOCEL


Boom Hinge at Fully Retracted Position
Non Operating Position
PORTO TROMBETAS
SHIPLOADER
Boom Length 36.40
23.00 m. Max. Shuttle Travel
Operator's Cab (near side)
Max. Raised Operating Position
Boom Operating Range
Max. Low Operating Position
Mean Low Water
Fender Line
16,000 d.w.t. Ship
50,000 d.w.t. Ship
Min. 1.2 m. Underkeel Clearance
Approach Conveyor Belt
Turntable
Linear Track
All Dimensions in Metres


151.00 m. End to End Hatches 50,000 d.w.t.
Downstream
Linear Shiploader Centreline Boom Extended and Extreme Position Shown
ShipBoom Travel Zone 106° 46' 19"
Boom Loading Range with Chute Boom in Horizontal Position
Centreline 50,000 d.w.t. Ship
Work Point
Work Point
Chute Centreline
Shiploader Gantry Rails
Operating Cab
10.00 m.
Linear Shiploader Centreline
West End Dolphin
4.60 m.
45.75 m.
45.75 m.
East End Dolphin
4.60 m.
36.40 m.
30.00 m.
50.35 m.
50.35 m.
94.00 m. Max. Reach
57.60 m. Minimum Bridge Span
0.50 m.
Shiploader Turntable Centreline
Transfer Portal Centreline
Linear Shiploader Track Centreline Retracted and normal position to wharf shown
Turntable
PORTO TROMBETAS
SHIPLOADER
GENERAL PLAN

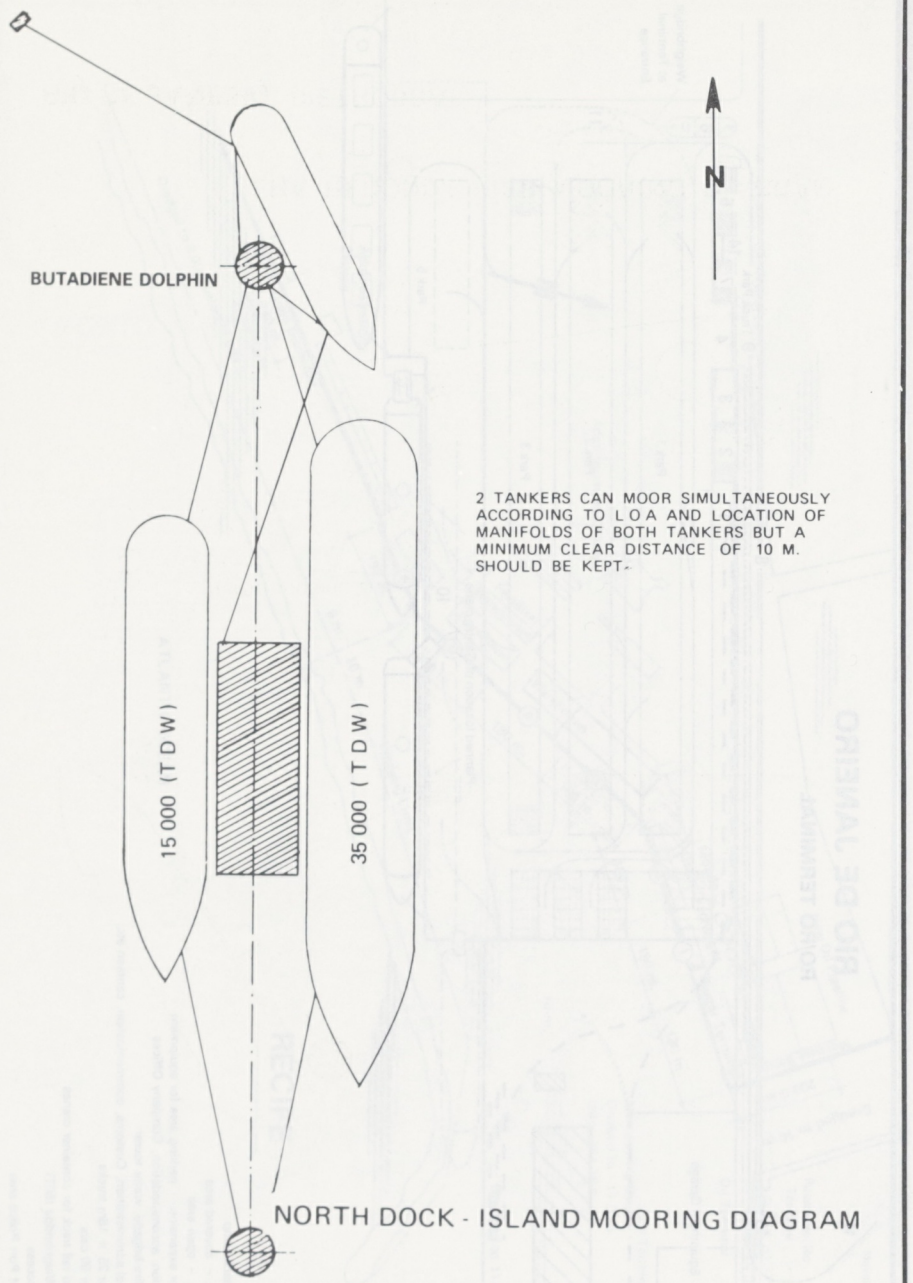

Naval Base.
New Oil Pipeline
Molasses Berth
200.00m
Dredged to 10 m.
Future Ro/Ro Terminal
Oil Terminal
Mobile Grain Discharger
Sugar Terminal
180 m.
180 m.
180 m.
Oil Terminal
Manoeuvring Basin Dredged to -11.00m below M.L.W.S.
Olinda Mole
Administration Offices
Warehouses
Fertilizer Warehouses
Warehouse
180 m.
180 m.
180 m.
10 m.
Dredged to 11.5 m.
190 m.
Dredging Limit
8 m.
10 m.
Administration Offices
Mobile Grain Discharger
140 m.
Grain Berth
Dredged to 8.00m below M.L.W.S.
RECIFE
ATLANTIC OCEAN





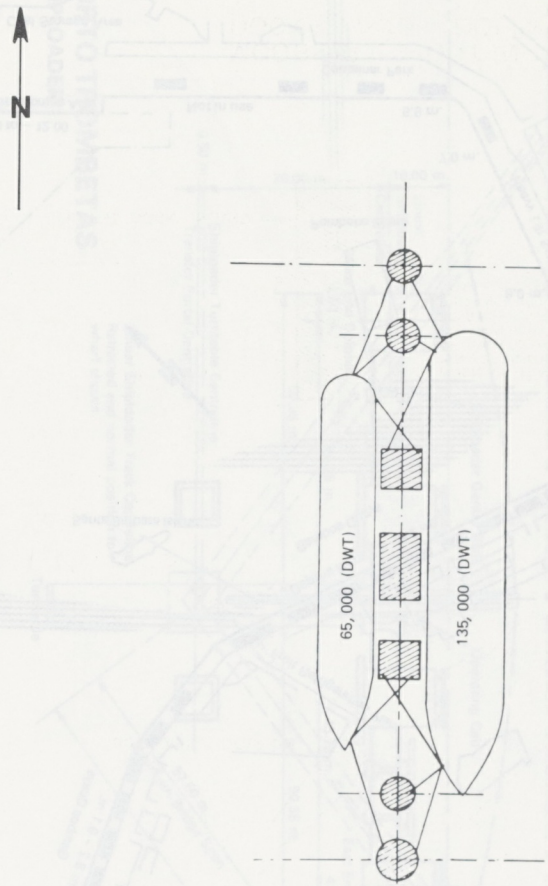
KEY:

1. Piggy-back ramp
2. Offices – covered area
3. Offices – open area
4. Area for expansion – parking area for equipment
5. Reception, accommodation, Company Offices
6. Tank, fire brigade, water tower
7. Terminal administration, Customs, communication, canteen etc.
8. Park for 25 × 16m trucks
9. Park for 60 cars
10. Planned rail track for container cranes
11. Road Weighbridge (50T)
12. Road access
13. Limit of Port Police area
14. Pedestrian entrance



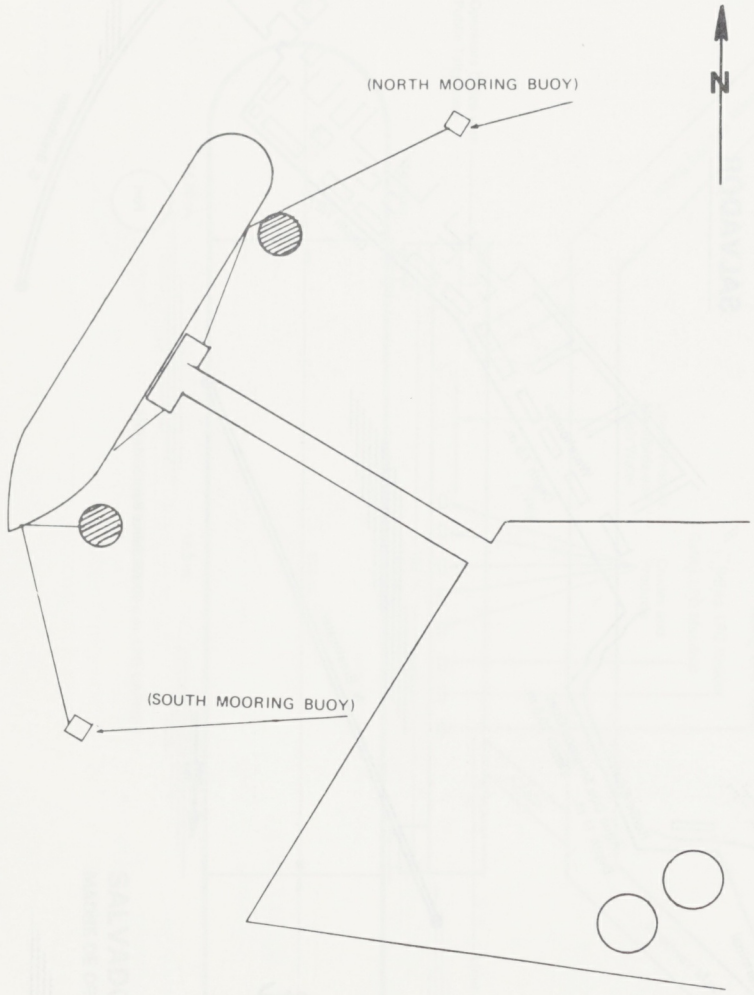
NORTH DOCK - ISLAND MOORING DIAGRAM

RIO DE JANEIRO (PETROBRAS)



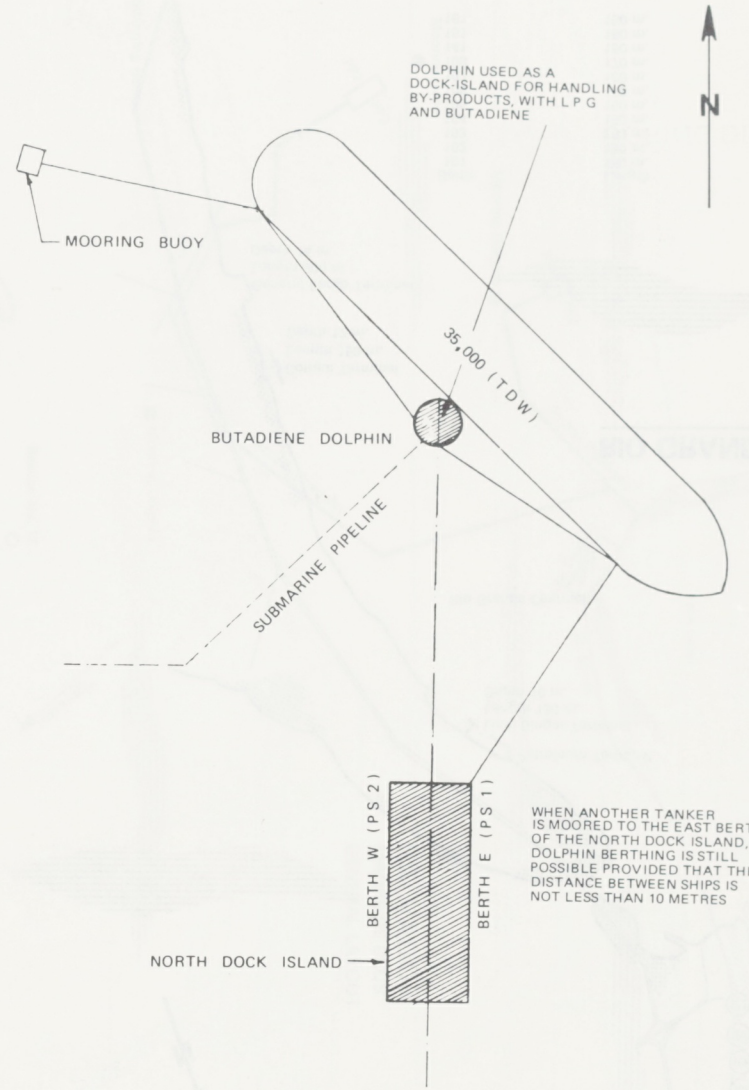
SOUTH DOCK - ISLAND MOORING DIAGRAM

RIO DE JANEIRO (PETROBRAS)



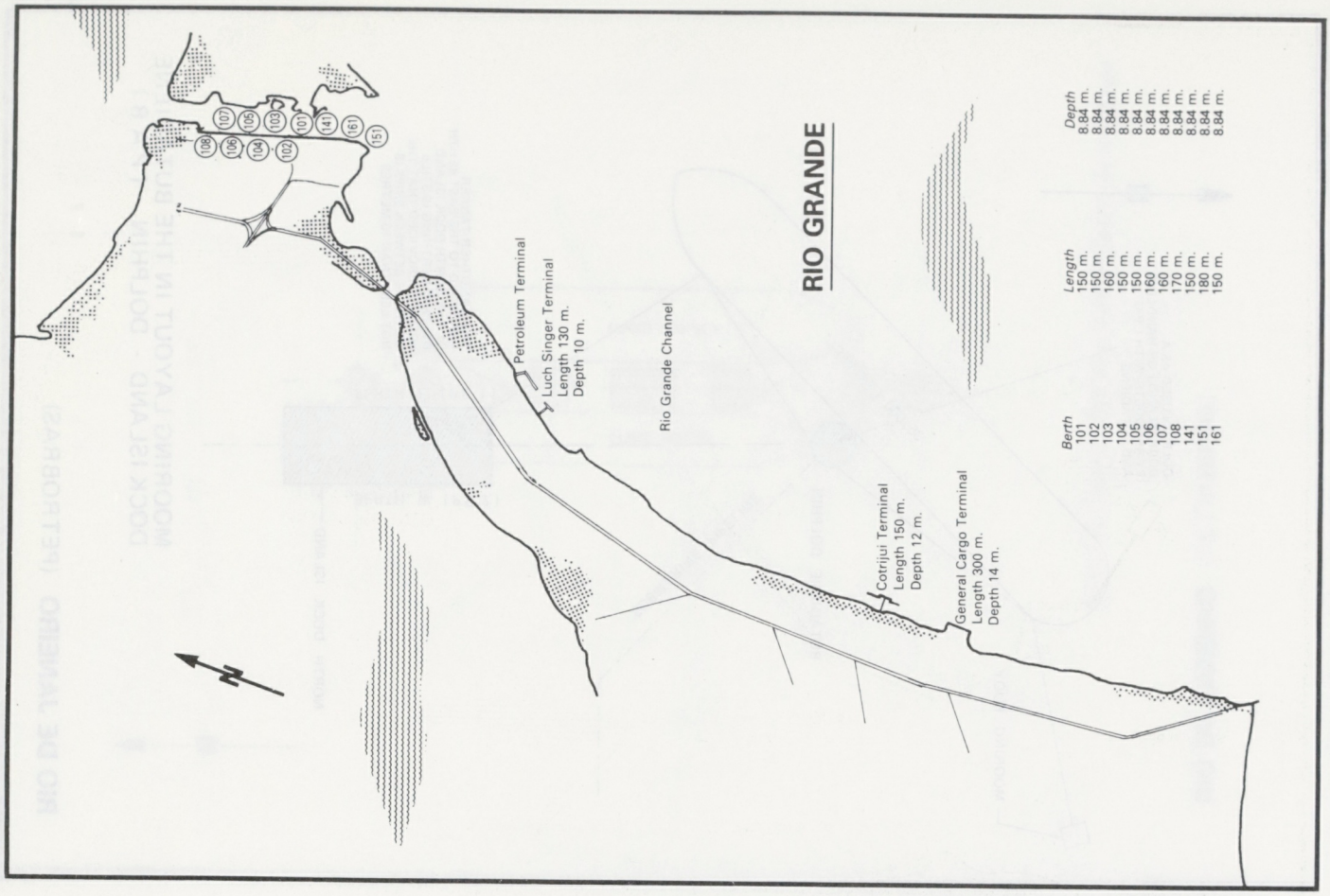
ILHA REDONDA PIER MOORING DIAGRAM

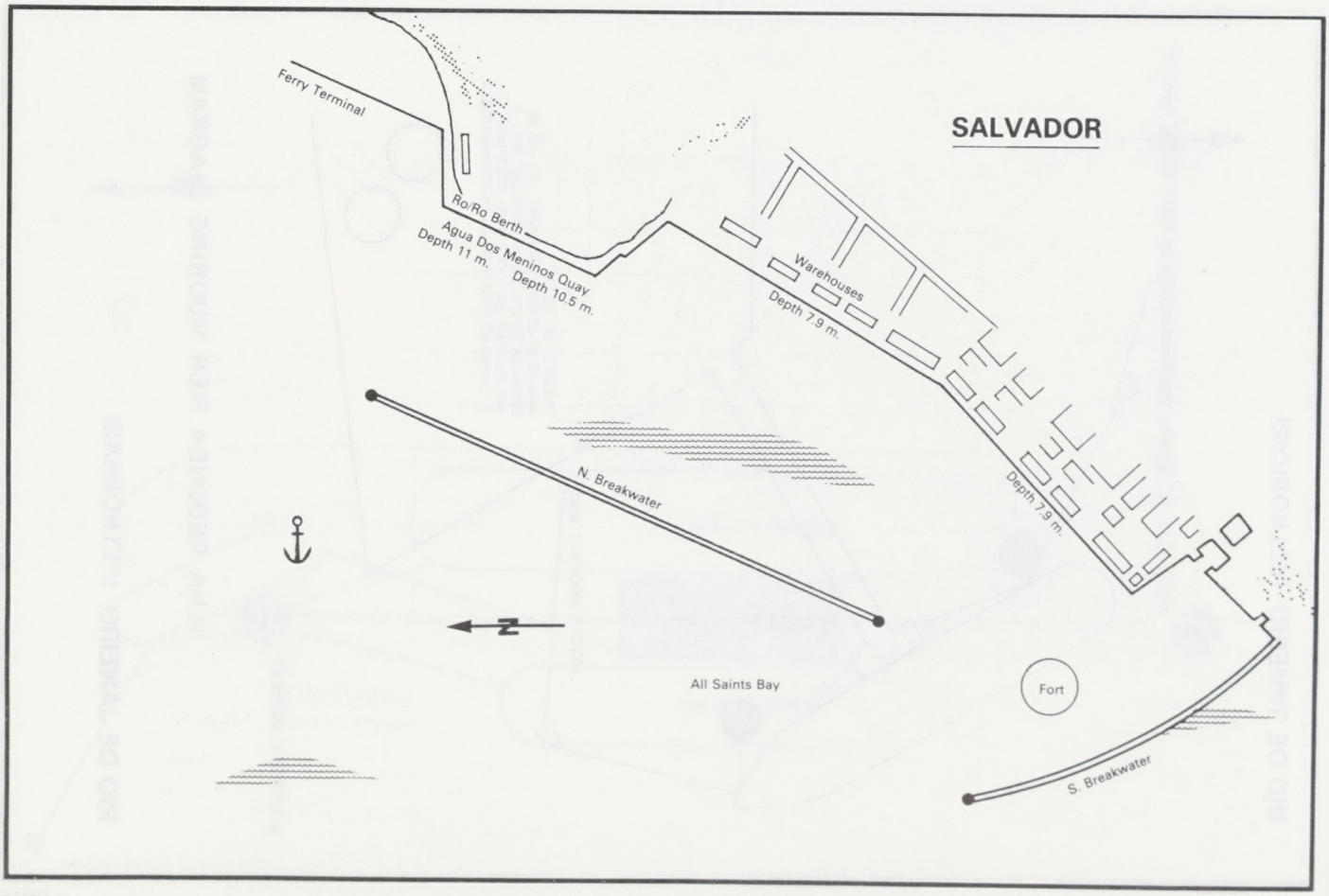
RIO DE JANEIRO (PETROBRAS)

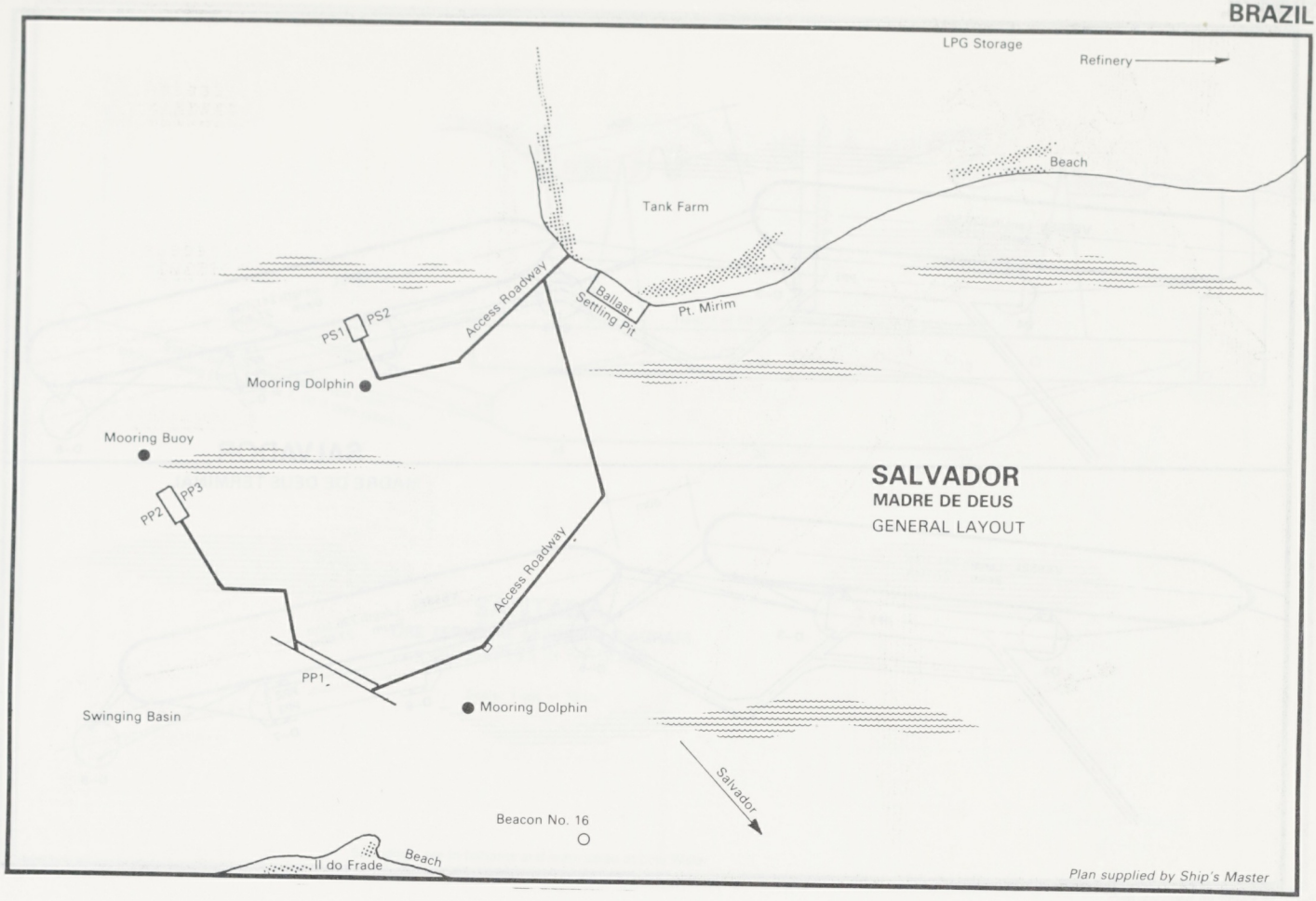


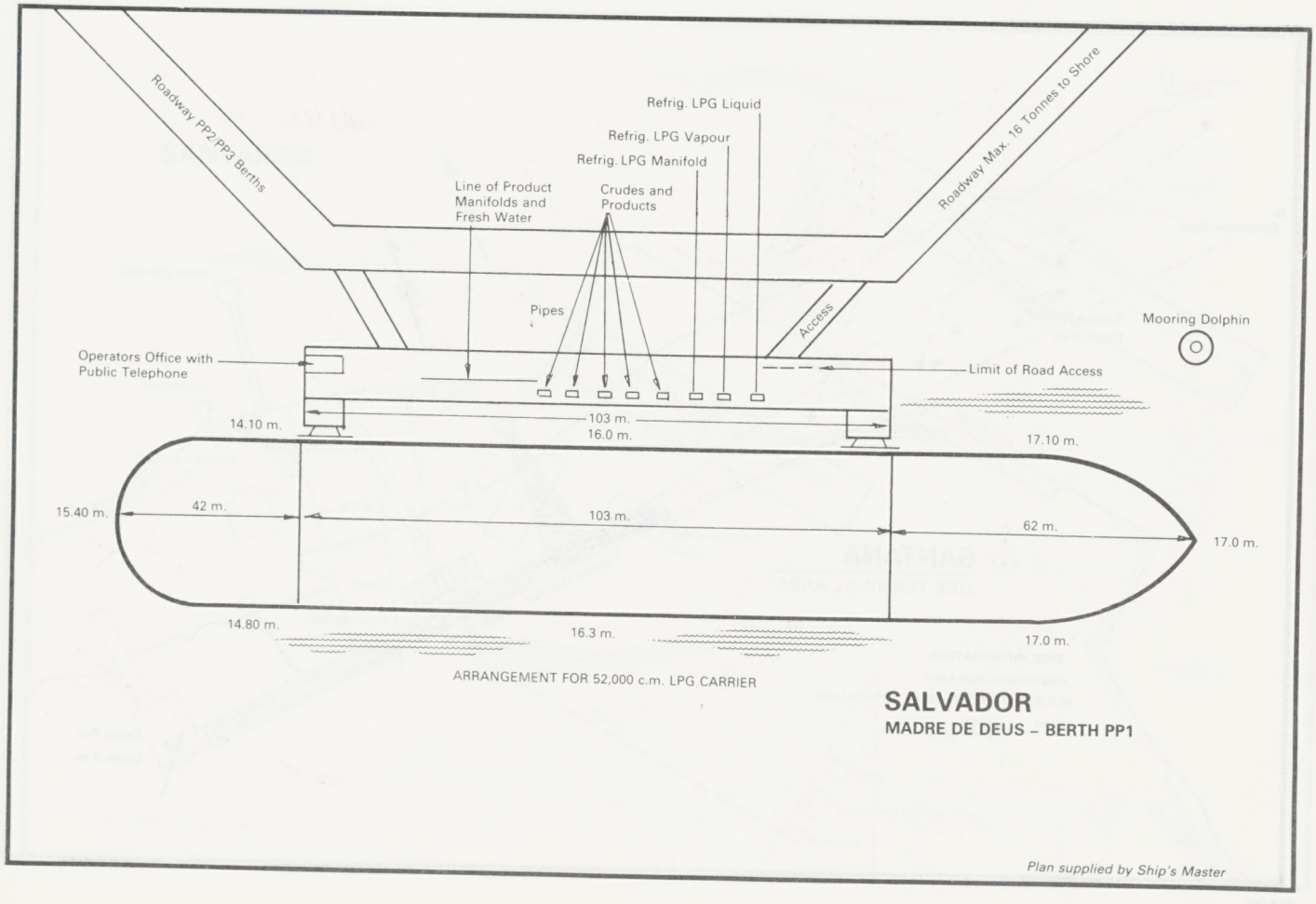
MOORING LAYOUT IN THE BUTADIENE DOCK ISLAND - DOLPHIN - (P A B)

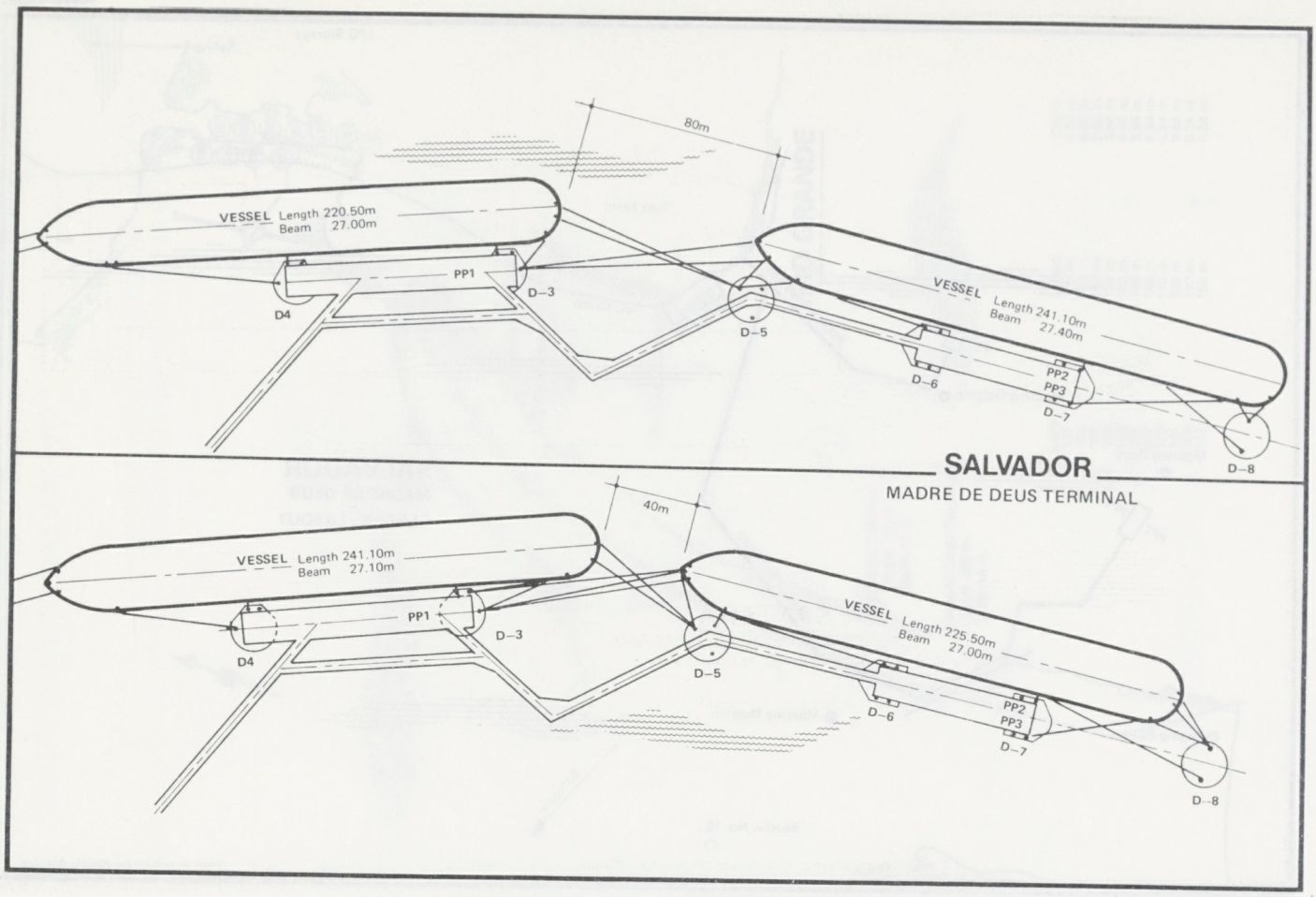
RIO DE JANEIRO (PETROBRAS)


RIO GRANDE
Petroleum Terminal
Luch Singer Terminal
Length 130 m.
Depth 10 m.
Rio Grande Channel
Cotrijui Terminal
Length 150 m.
Depth 12 m.
General Cargo Terminal
Length 300 m.
Depth 14 m.
Berth
101
102
103
104
105
106
107
108
141
151
161
Length
150 m.
150 m.
160 m.
150 m.
150 m.
160 m.
160 m.
160 m.
170 m.
150 m.
180 m.
150 m.
Depth
8.84 m.
8.84 m.
8.84 m.
8.84 m.
8.84 m.
8.84 m.
8.84 m.
8.84 m.
8.84 m.
8.84 m.
8.84 m.
8.84 m.

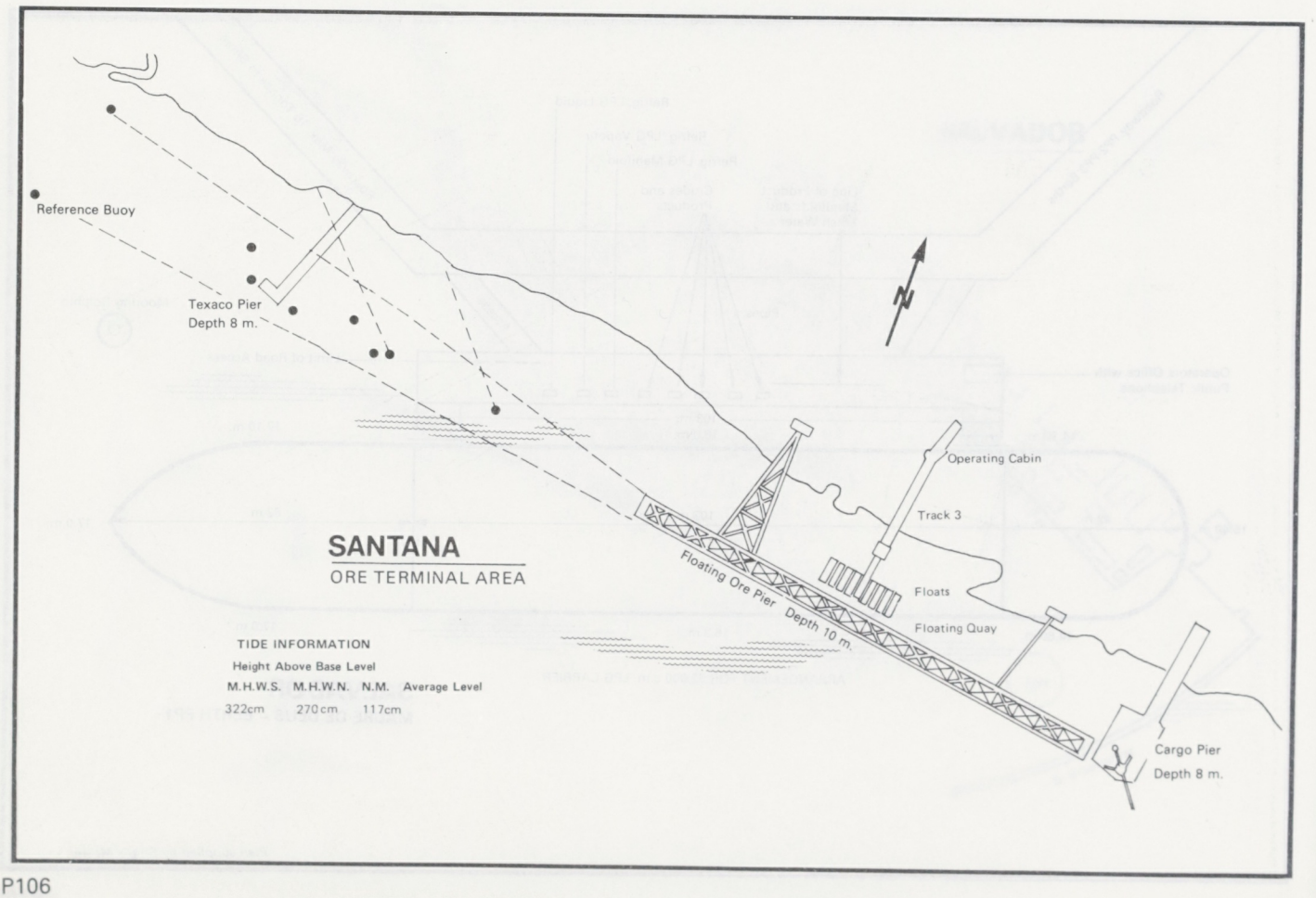

SALVADOR
Ferry Terminal
Ro/Ro Berth
Agua Dos Meninos Quay
Depth 11 m.
Depth 10.5 m.
Warehouses
Depth 7.9 m.
Depth 7.9 m.
N. Breakwater
All Saints Bay
Fort
S. Breakwater


LPG Storage
Refinery
Beach
Tank Farm
Ballast Setting Pit
Pt. Mirim
Access Roadway
PS1
PS2
Mooring Dolphin
Mooring Buoy
PP2
PP3
Access Roadway
PP1
Swinging Basin
Mooring Dolphin
Salvador
Beacon No. 16
Ilha do Frade
Beach
SALVADOR
MADRE DE DEUS
GENERAL LAYOUT
Plan supplied by Ship's Master


Roadway PP2/PP3 Berths
Refrig. LPG Liquid
Refrig. LPG Vapour
Refrig. LPG Manifold
Line of Product Manifolds and Fresh Water
Crudes and Products
Roadway Max. 16 Tonnes to Shore
Pipes
Access
Mooring Dolphin
Operators Office with Public Telephone
Limit of Road Access
14.10 m.
103 m.
16.0 m.
17.10 m.
15.40 m.
42 m.
103 m.
62 m.
17.0 m.
14.80 m.
16.3 m.
17.0 m.
ARRANGEMENT FOR 52,000 c.m. LPG CARRIER
SALVADOR
MADRE DE DEUS – BERTH PP1
Plan supplied by Ship's Master



SALVADOR
MADRE DE DEUS TERMINAL

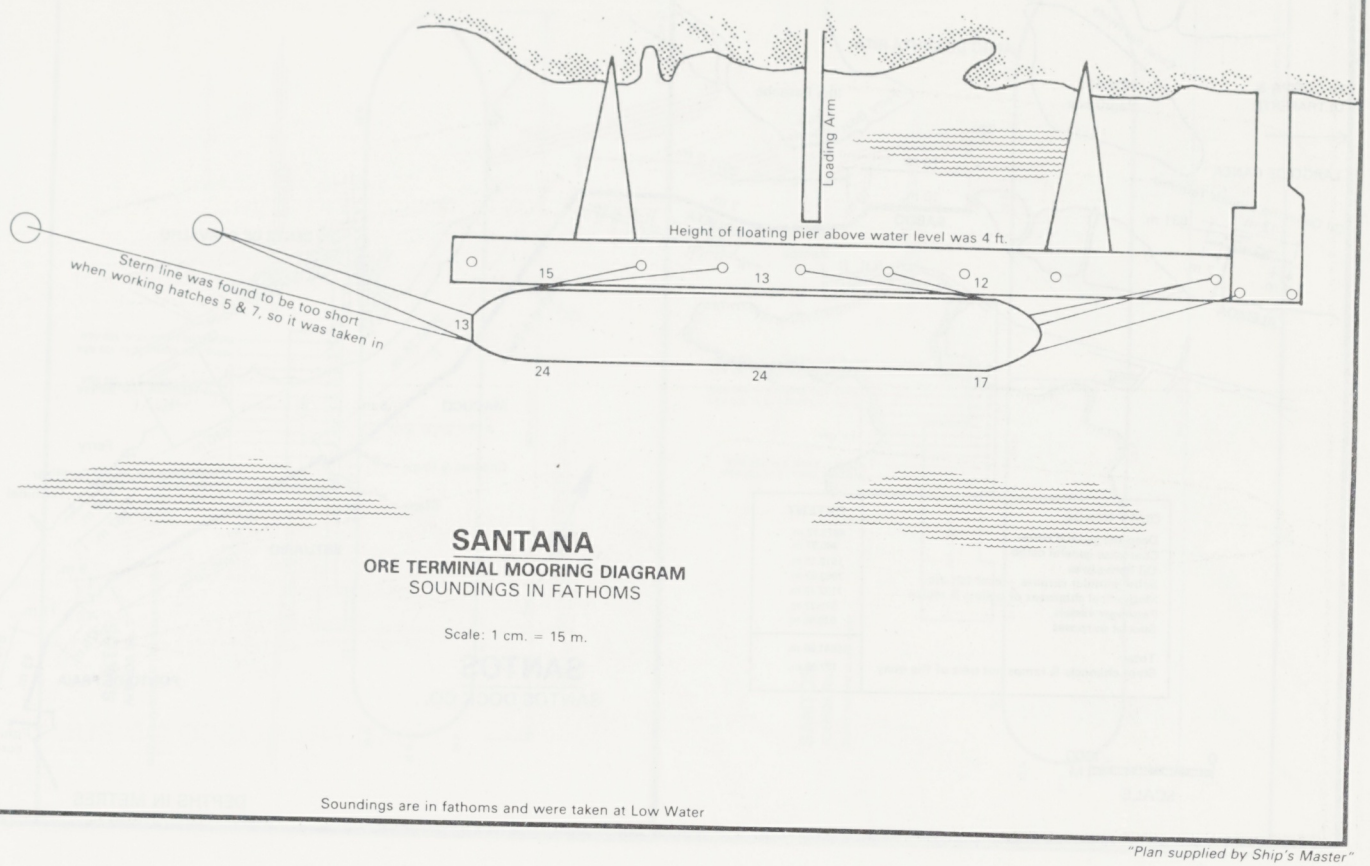


SANTANA
ORE TERMINAL AREA

TIDE INFORMATION

Height Above Base Level

M.H.W.S.	M.H.W.N.	N.M.	Average Level
322cm	270cm	117cm	



SANTANA

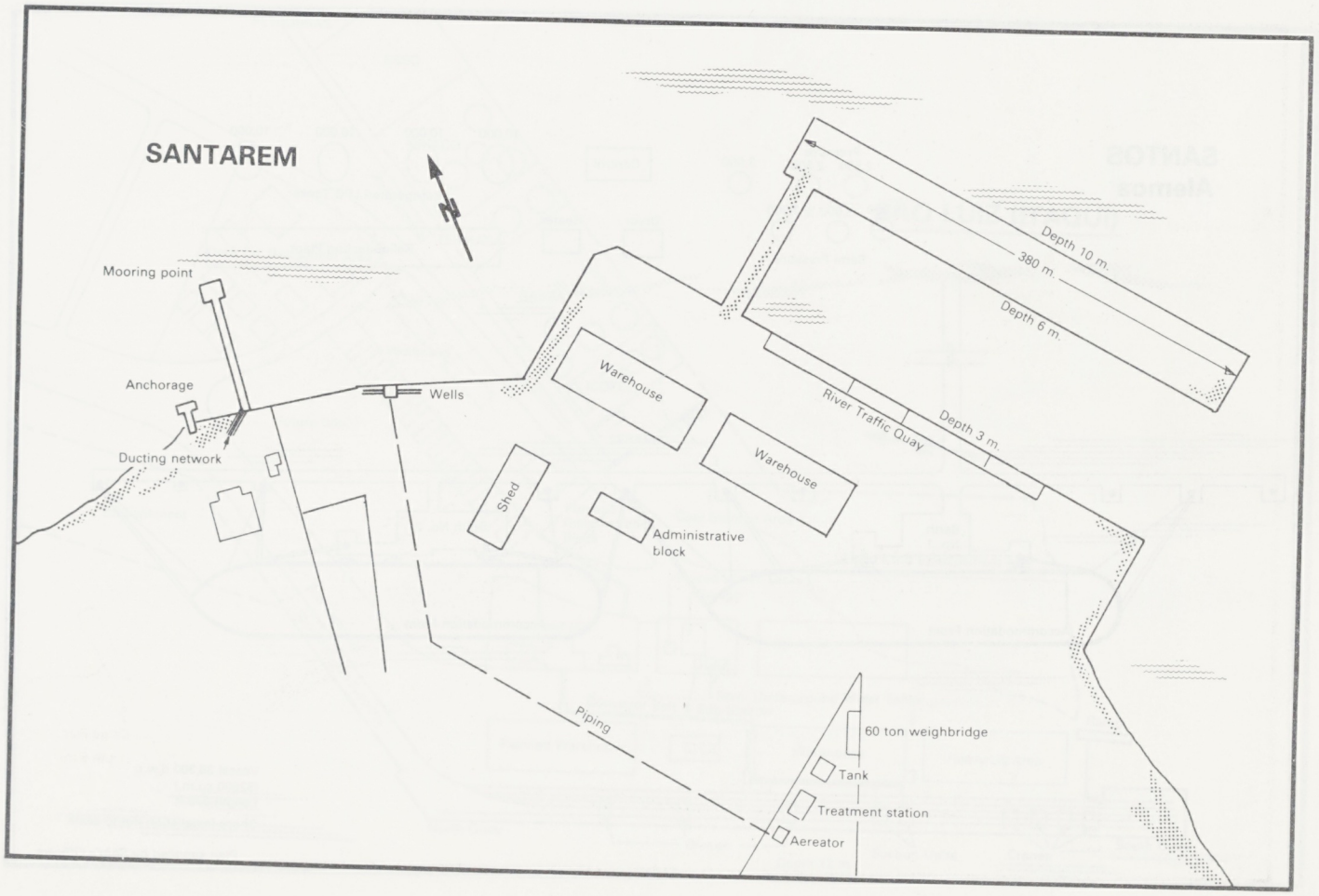
ORE TERMINAL MOORING DIAGRAM

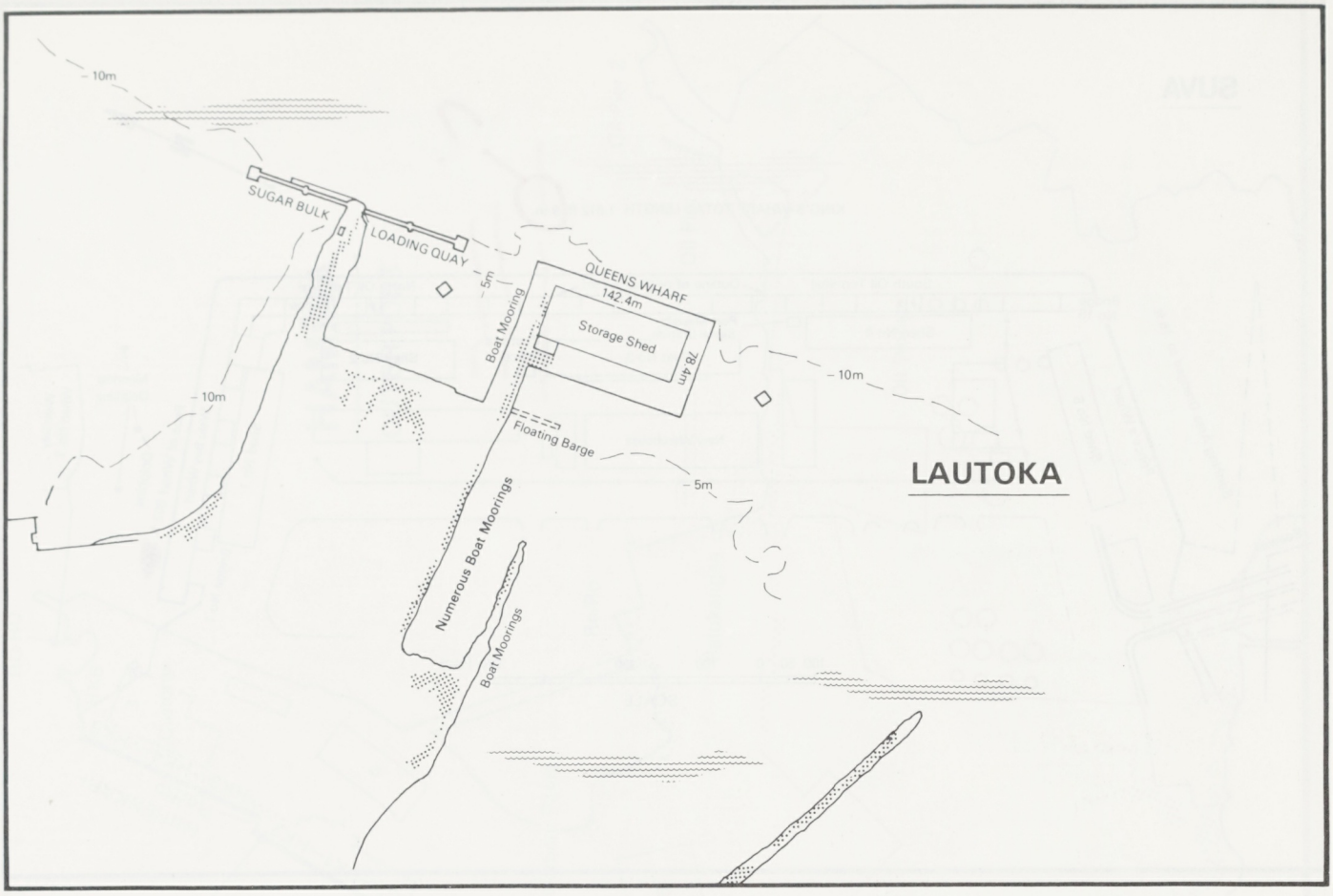
SOUNDINGS IN FATHOMS

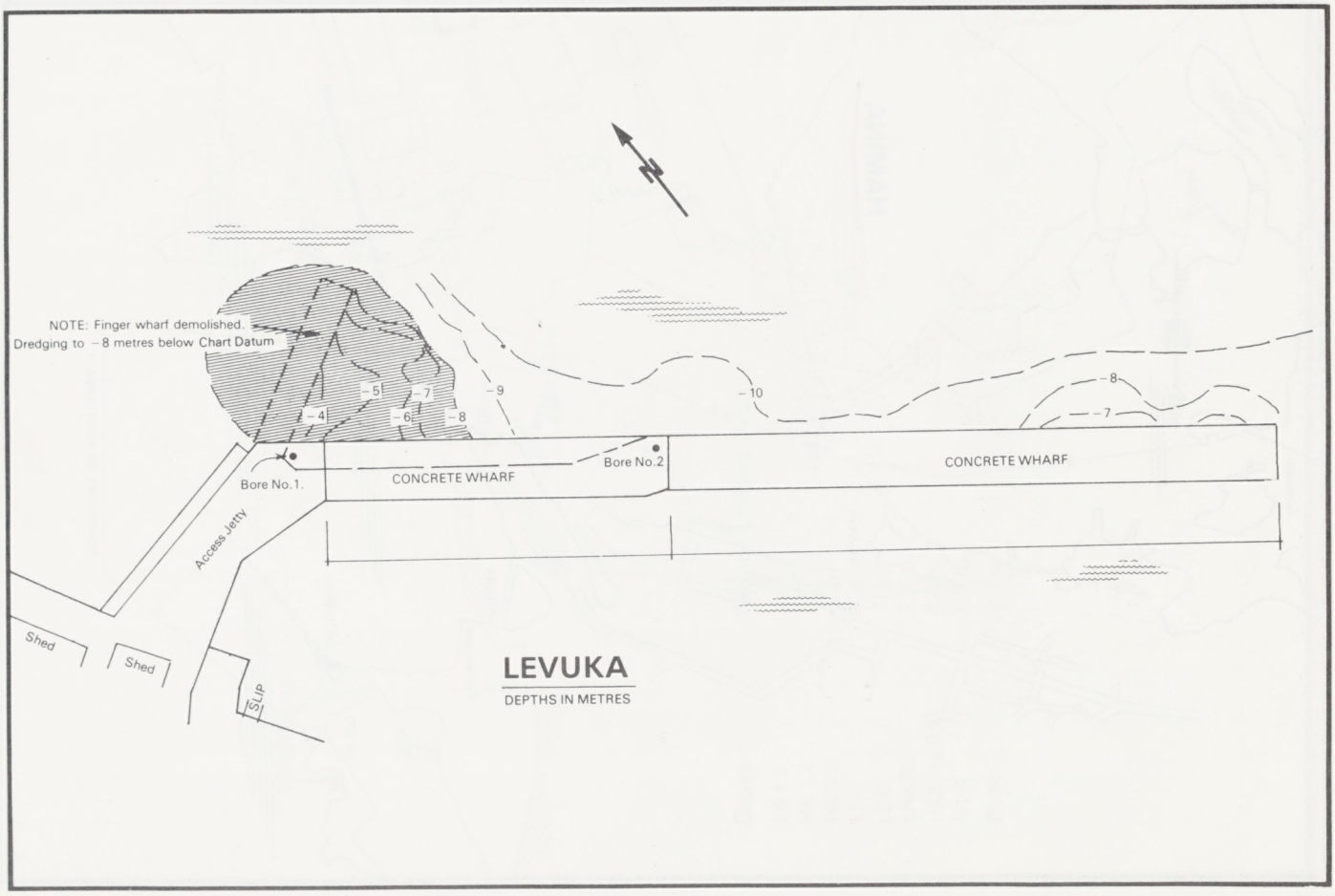
Scale: 1 cm. = 15 m.

Soundings are in fathoms and were taken at Low Water

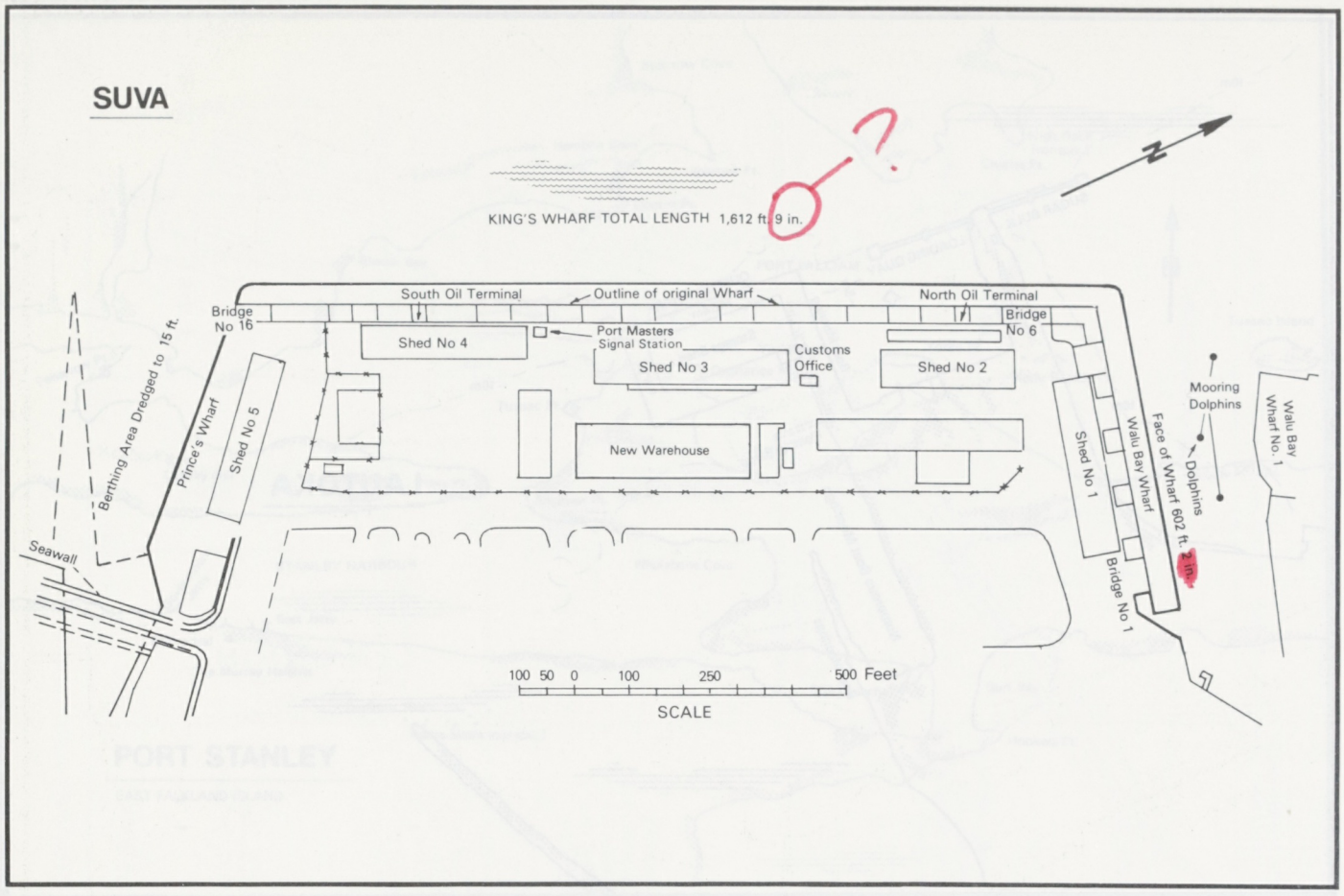
"Plan supplied by Ship's Master"



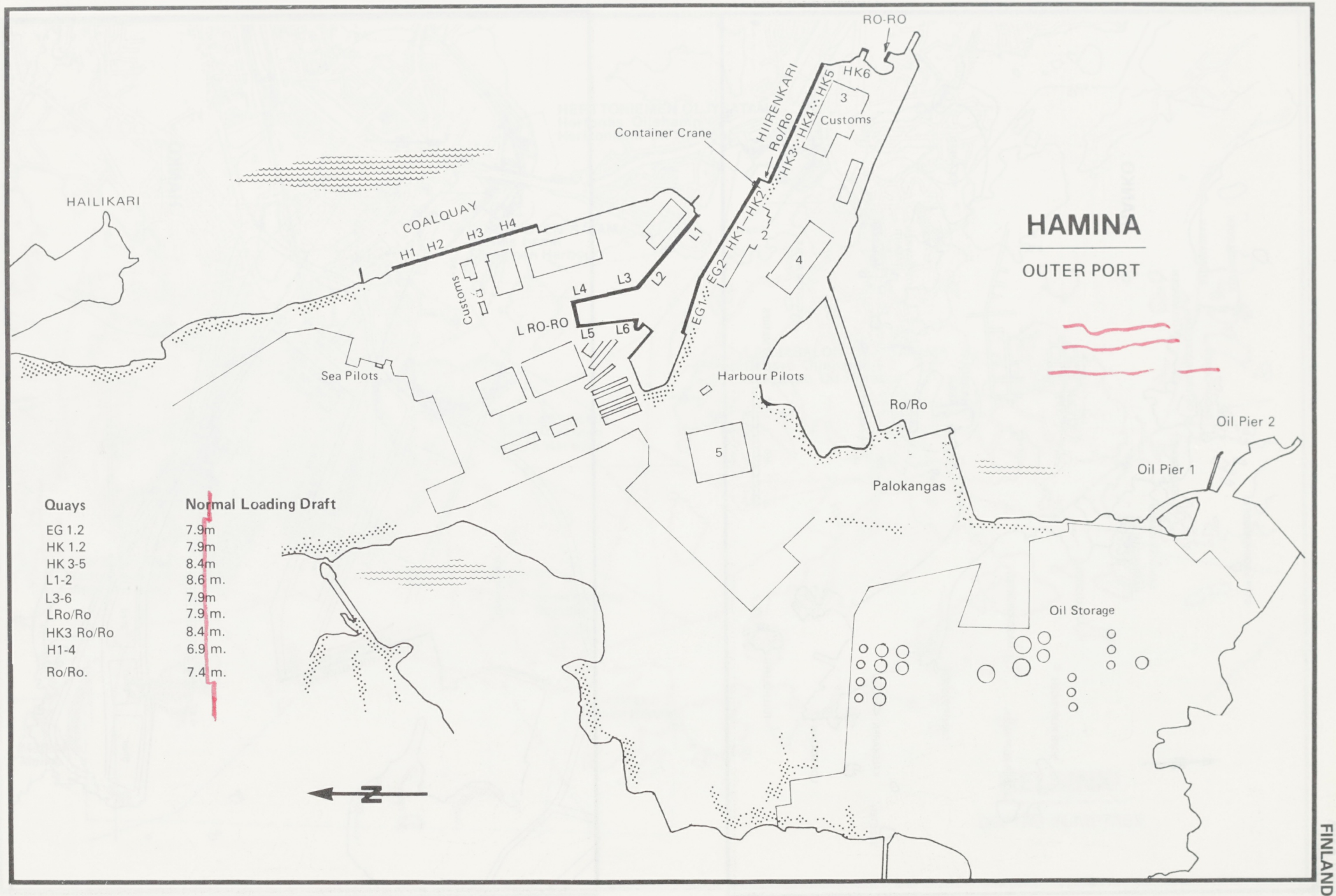

10m
SUGAR BULK
LOADING QUAY
5m
QUEENS WHARF
142.4m
Storage Shed
78.4m
Boat Mooring
10m
10m
Floating Barge
5m
Numerous Boat Moorings
Boat Moorings
LAUTOKA

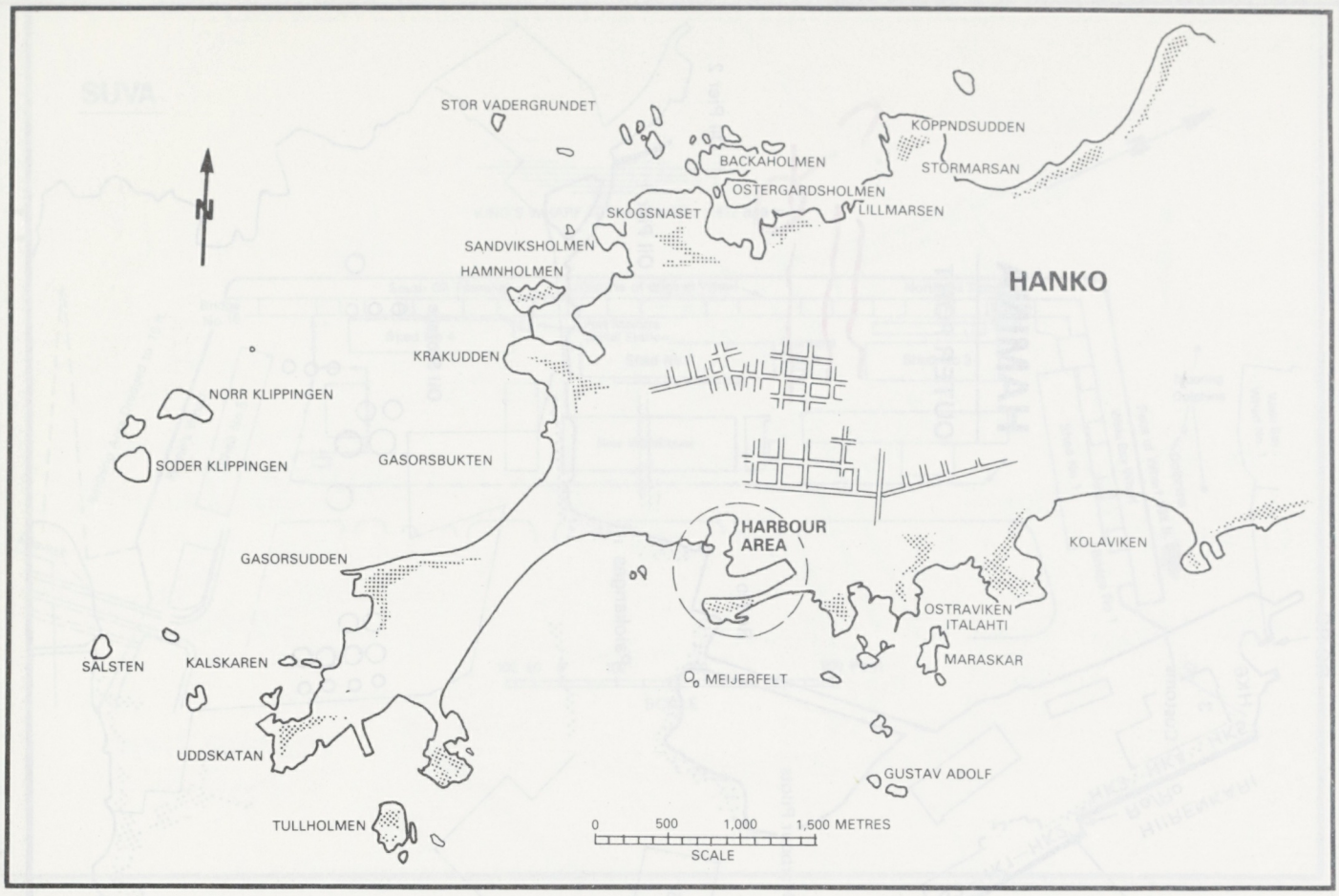

NOTE: Finger wharf demolished.
Dredging to −8 metres below Chart Datum
−4
−5
−6
−7
−8
−9
−10
−8
−7
Bore No.1.
CONCRETE WHARF
Bore No.2
CONCRETE WHARF
Access Jetty
Shed
Shed
SLIP
LEVUKA
DEPTHS IN METRES

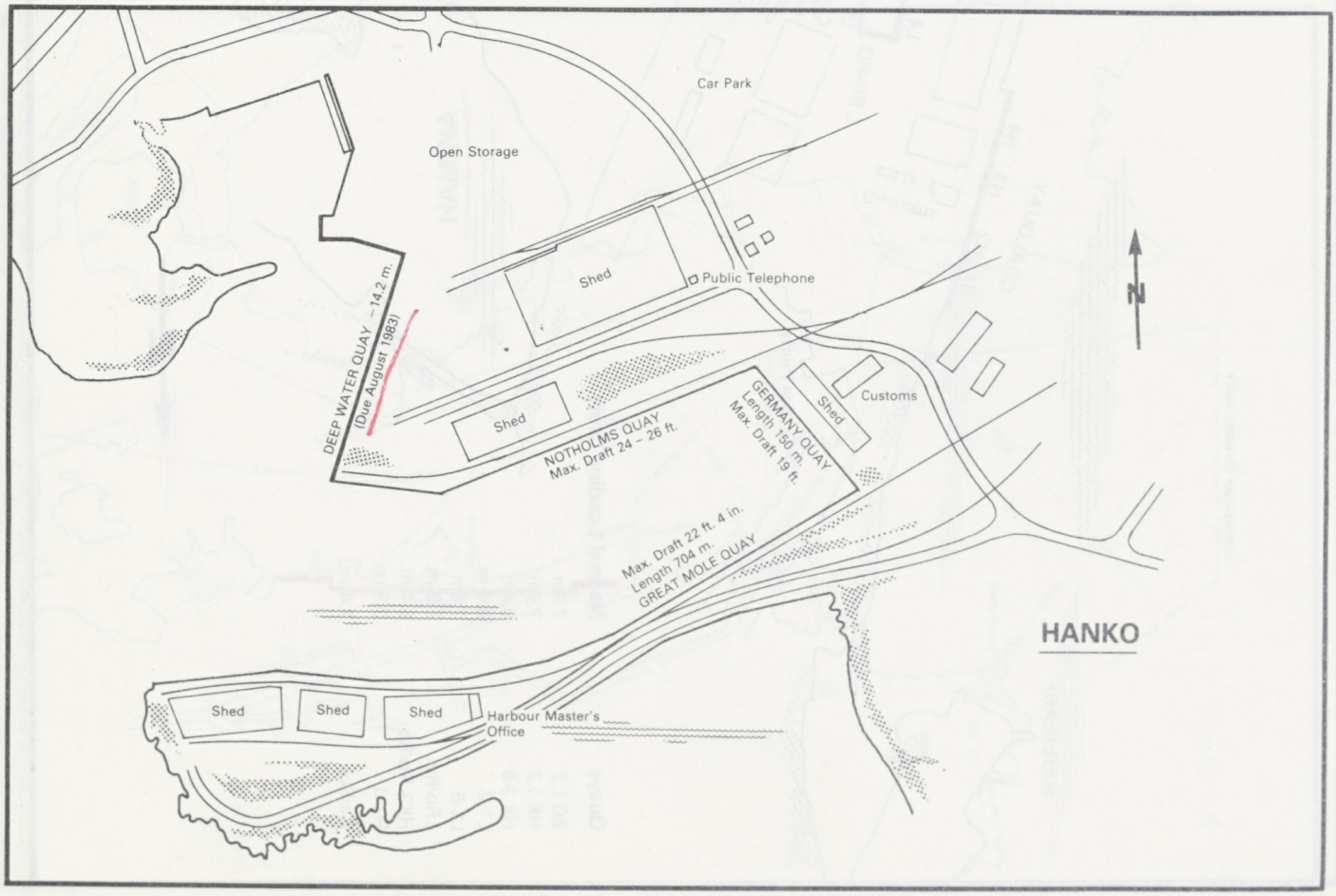
SUVA

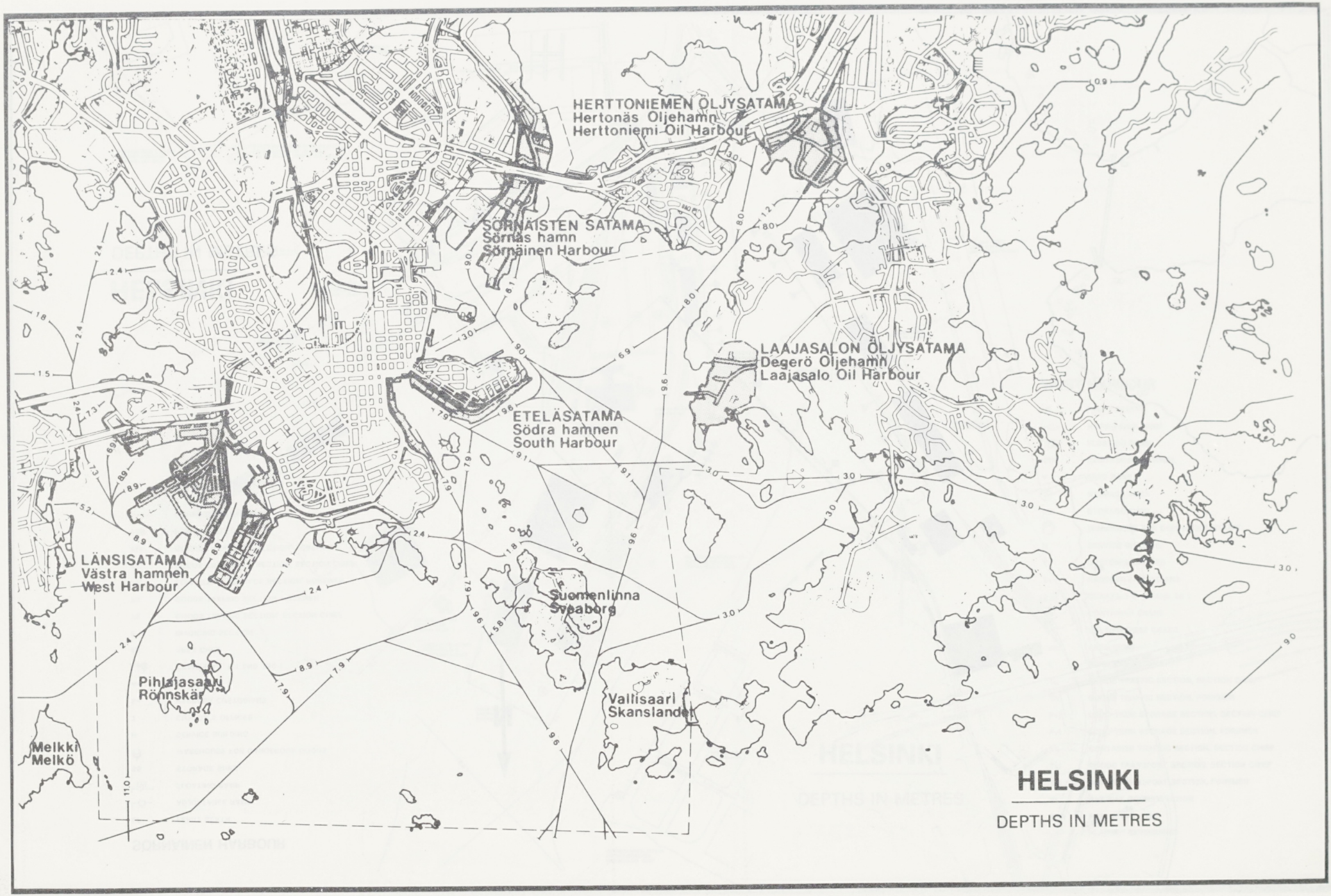

KING'S WHARF TOTAL LENGTH 1,612 ft. 9 in.
South Oil Terminal
Outline of original Wharf
North Oil Terminal
Bridge No 16
Bridge No 6
Shed No 4
Port Masters Signal Station
Customs Office
Shed No 3
Shed No 2
New Warehouse
Shed No 1
Shed No 5
Prince's Wharf
Berthing Area Dredged to 15 ft.
Seawall
Walu Bay Wharf
Face of Wharf 602 ft. 2 in.
Bridge No 1
Mooring Dolphins
Dolphins
Walu Bay Wharf No. 1
100 50 0 100 250 500 Feet
SCALE

HAMINA
4 m
4.3 m
6.0m
8.0m
6.9 m
8.0m
8.0m
8.4 m
Hiiripkari
Ro-Ro
9.0m
Tervasaari
Halikari
Coalquay
Lakulahti
Ro/Ro
Palokangas
Oil Harbour
9.0 m
BOUNDARY OF PORT AREA


HAMINA
OUTER PORT
RO-RO
HK6
HK5
HK4
HK3
HK2
HK1
EG2
EG1
HIIRENKARI
Ro/Ro
3
Customs
Container Crane
HAILIKARI
COALQUAY
H1 H2 H3 H4
L1
L2
L3
L4
L5
L6
L RO-RO
Customs
2
4
Sea Pilots
Harbour Pilots
Ro/Ro
5
Oil Pier 2
Oil Pier 1
Palokangas
Oil Storage
N
Quays
Normal Loading Draft
EG 1.2 7.9m
HK 1.2 7.9m
HK 3-5 8.4m
L1-2 8.6 m.
L3-6 7.9m
LRo/Ro 7.9 m.
HK3 Ro/Ro 8.4 m.
H1-4 6.9 m.
Ro/Ro. 7.4 m.


STOR VADERGRUNDET
KOPPNDSUDDEN
BACKAHOLMEN
STORMARSAN
OSTERGARDSHOLMEN
LILLMARSEN
SKOGSNASET
SANDVIKSHOLMEN
HAMNHOLMEN
HANKO
KRAKUDDEN
NORR KLIPPINGEN
SODER KLIPPINGEN
GASORSBUKTEN
HARBOUR AREA
KOLAVIKEN
GASORSUDDEN
OSTRAVIKEN
ITALAHTI
MARASKAR
SALSTEN
KALSKAREN
MEIJERFELT
UDDSKATAN
GUSTAV ADOLF
TULLHOLMEN
0 500 1,000 1,500 METRES
SCALE


Car Park
Open Storage
Shed
Public Telephone
DEEP WATER QUAY – 14.2 m.
(Due August 1983)
Shed
NOTHOLMS QUAY
Max. Draft 24 – 26 ft.
GERMANY QUAY
Length 150 m.
Max. Draft 19 ft.
Shed
Customs
Max. Draft 22 ft. 4 in.
Length 704 m.
GREAT MOLE QUAY
HANKO
Shed
Shed
Shed
Harbour Master's Office



FINLAND

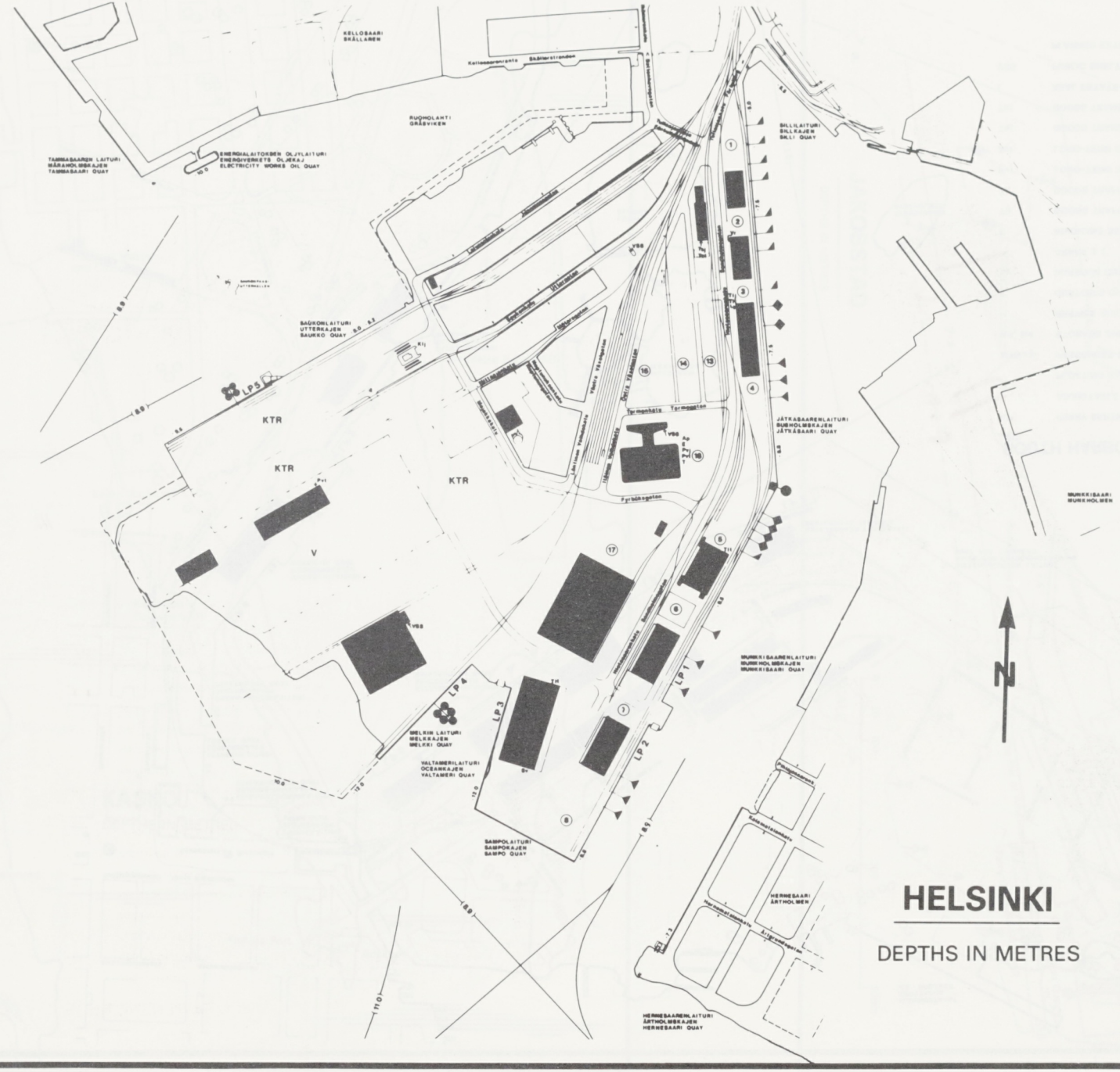
P259

SÖRNÄINEN HARBOUR

LP	FERRY BERTH
	ADJUSTABLE RAMP
	FLOATING RAMP
S5	STORAGE SHED
	WAREHOUSE FOR DANGEROUS GOODS
H	SERVICE BUILDING
T	CUSTOM'S OFFICES
Sv	HARBOUR CUSTODIANS
Av	CAR SCALE
	CRANES 5 t, 6 t AND 150 t
Ap	AREA CHIEF
E	INVOICING SECTION
Tlj	GOODS TRAFFIC SECTION, SECTION CHIEF
Tlt	GOODS TRAFFIC SECTION, FOREMEN
Pvt	LONG-TERM STORAGE SECTION, FOREMEN
Tsj	GOODS TRANSPORT SECTION, SECTION CHIEF
Tst	GOODS TRANSPORT SECTION, FOREMEN
VSS	PUBLIC SHELTER
- - -	PLANNED EXTENSIONS

HELSINKI

DEPTHS IN METRES



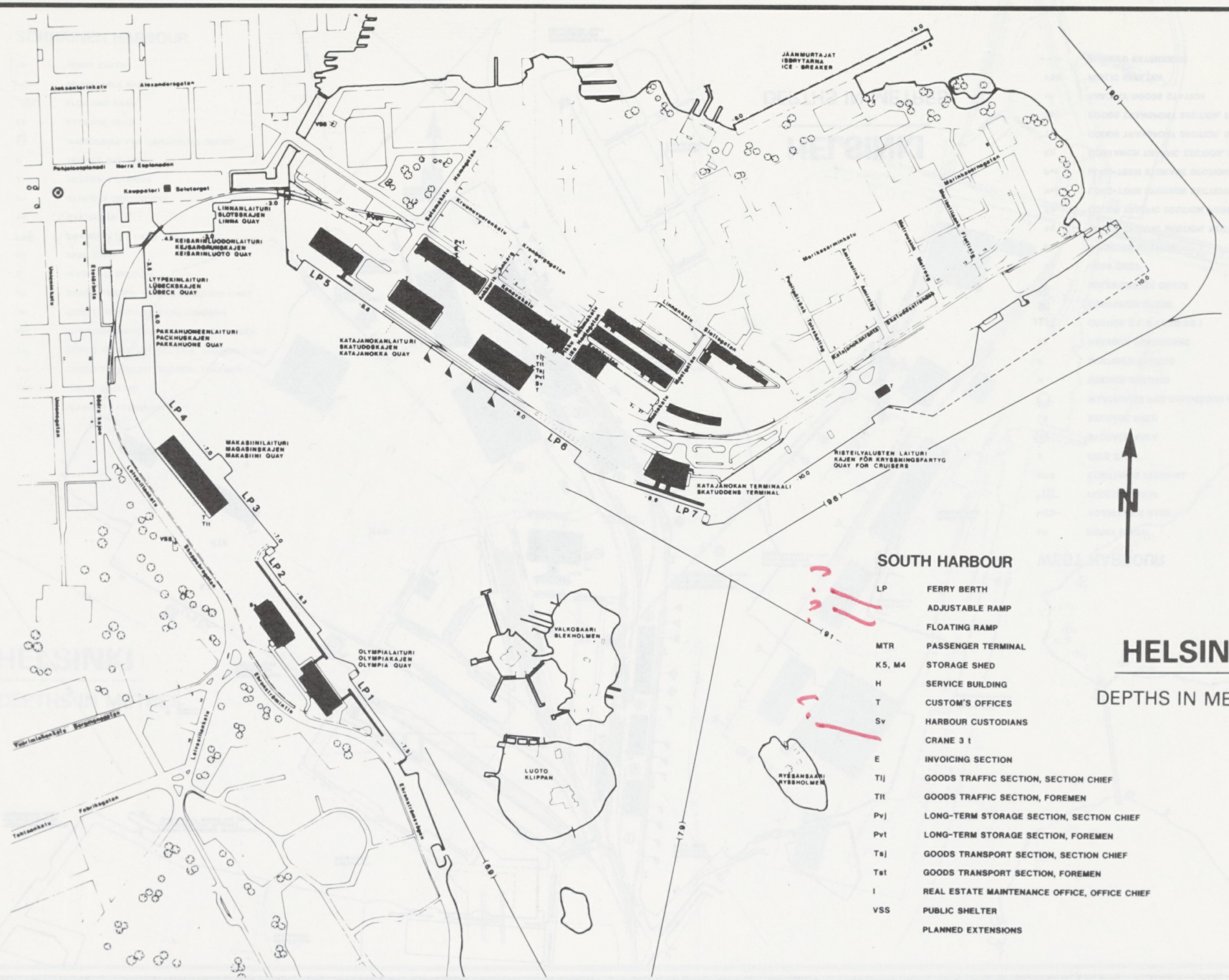
HELSINKI

DEPTHS IN METRES

WEST HARBOUR

LP	FERRY BERTH
	ADJUSTABLE RAMP
	FLOATING RAMP
KTR	CONTAINER TERMINAL
V	FREE ZONE
(5)	STORAGE AREA
L5	STORAGE SHED
	WAREHOUSE FOR DANGEROUS GOODS
H	SERVICE BUILDING
T	CUSTOM'S OFFICES
Sv	HARBOUR CUSTODIANS
	CRANES 3 t, 5 t AND 25 t
	CONTAINER CRANE
	MULTIPURPOSE CRANE
Ap	AREA CHIEF
E	INVOICING SECTION
Tlj	GOODS TRAFFIC SECTION, SECTION CHIEF
Tlt	GOODS TRAFFIC SECTION, FOREMEN
Pvj	LONG-TERM STORAGE SECTION, SECTION CHIEF
Pvt	LONG-TERM STORAGE SECTION, FOREMEN
Klj	CONTAINER TRAFFIC SECTION, SECTION CHIEF
Tsj	GOODS TRANSPORT SECTION, SECTION CHIEF
Tst	GOODS TRANSPORT SECTION, FOREMEN
Vr	RAILWAY GOODS STATION
VSS	PUBLIC SHELTER
- - -	PLANNED EXTENSIONS

FINLAND

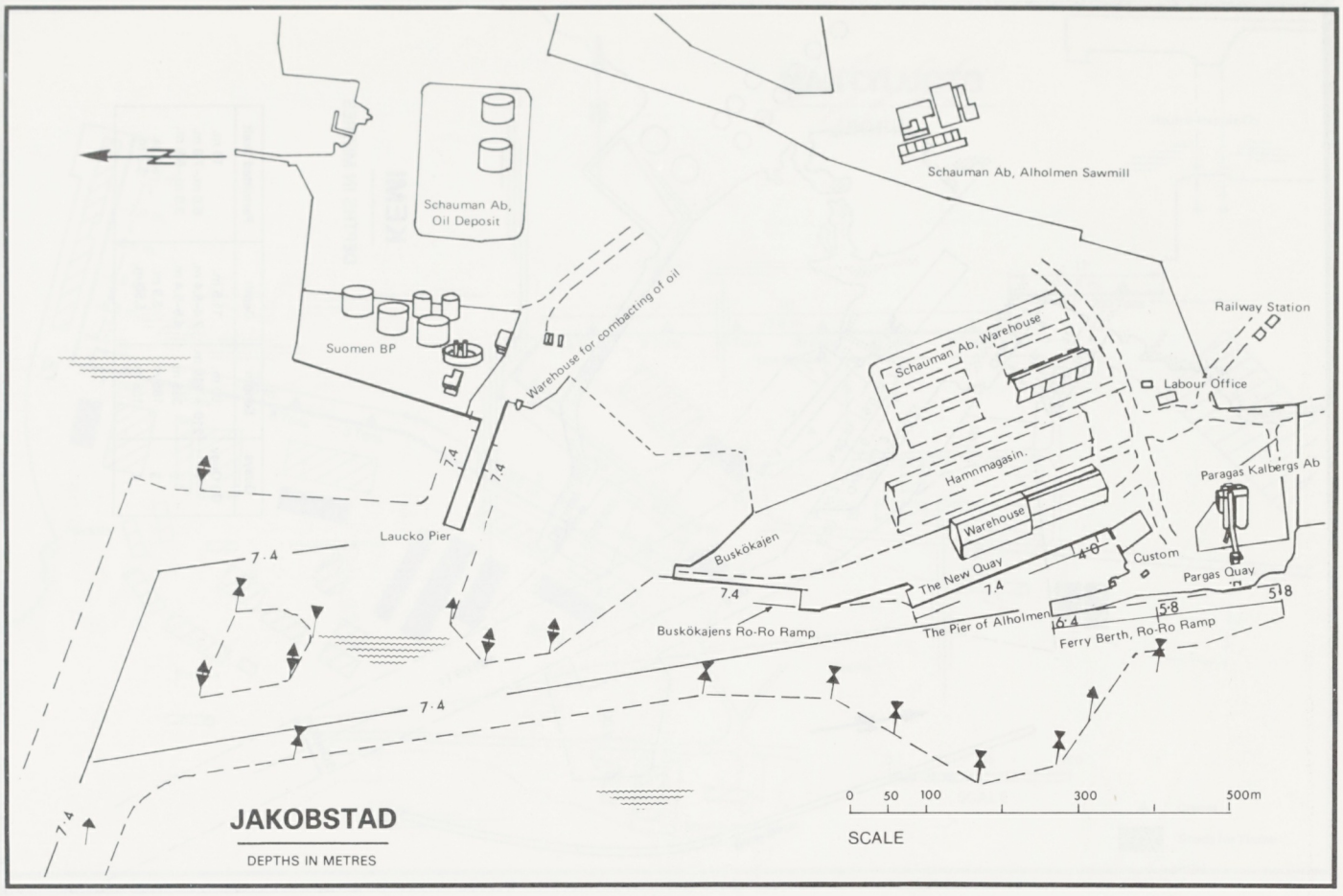


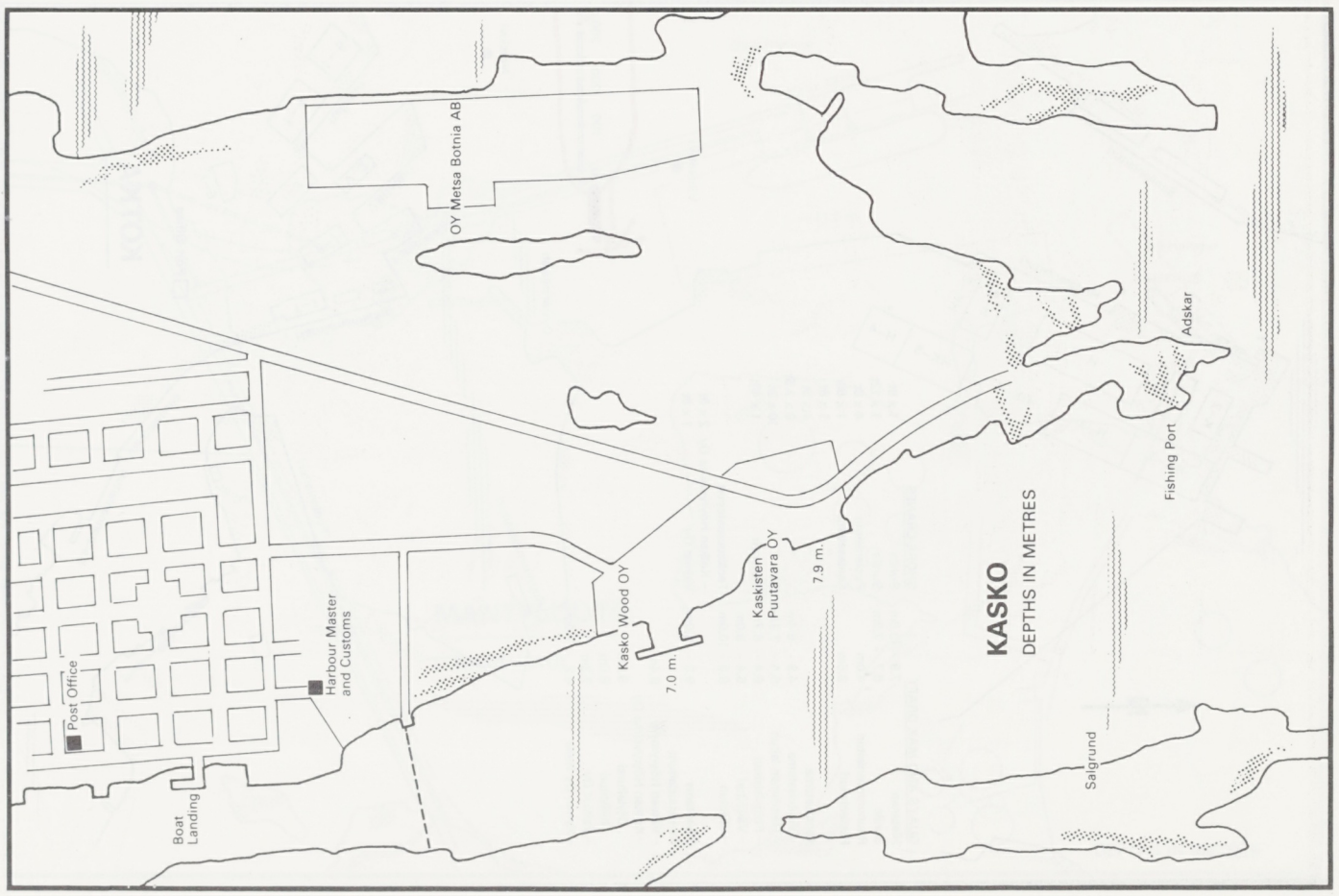
SOUTH HARBOUR

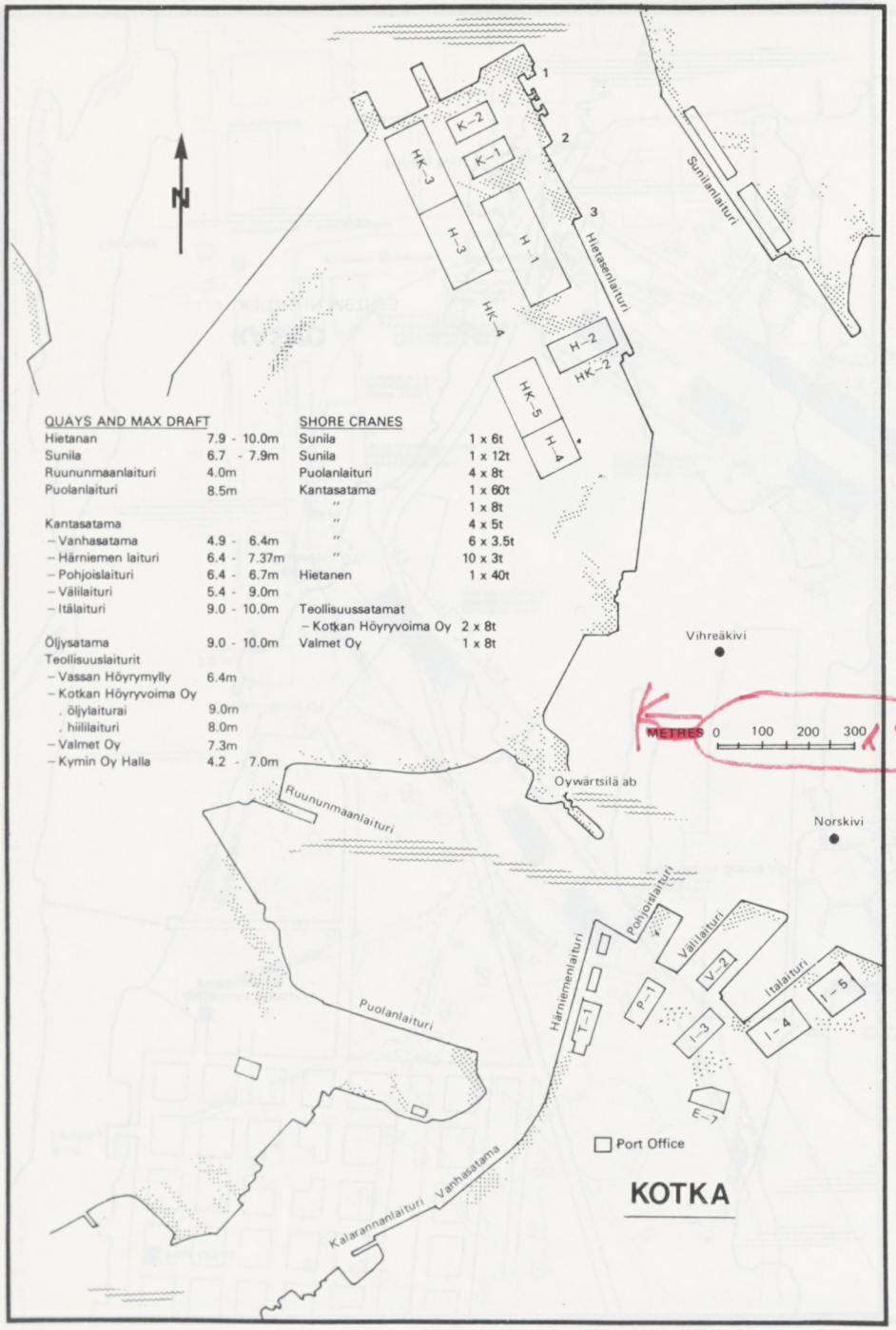
LP	FERRY BERTH
	ADJUSTABLE RAMP
	FLOATING RAMP
MTR	PASSENGER TERMINAL
K5, M4	STORAGE SHED
H	SERVICE BUILDING
T	CUSTOM'S OFFICES
Sv	HARBOUR CUSTODIANS
	CRANE 3 t
E	INVOICING SECTION
Tlj	GOODS TRAFFIC SECTION, SECTION CHIEF
Tlt	GOODS TRAFFIC SECTION, FOREMEN
Pvj	LONG-TERM STORAGE SECTION, SECTION CHIEF
Pvt	LONG-TERM STORAGE SECTION, FOREMEN
Tsj	GOODS TRANSPORT SECTION, SECTION CHIEF
Tst	GOODS TRANSPORT SECTION, FOREMEN
I	REAL ESTATE MAINTENANCE OFFICE, OFFICE CHIEF
VSS	PUBLIC SHELTER
	PLANNED EXTENSIONS

HELSINKI

DEPTHS IN METRES


N
Schauman Ab, Oil Deposit
Schauman Ab, Alholmen Sawmill
Suomen BP
Warehouse for combacting of oil
Railway Station
Schauman Ab, Warehouse
Labour Office
Hammmagasin
Paragas Kalbergs Ab
Warehouse
Laucko Pier
Buskökajen
Custom
The New Quay
Pargas Quay
Buskökajens Ro-Ro Ramp
The Pier of Alholmen
Ferry Berth, Ro-Ro Ramp
7.4
5.8
5.18
0 50 100 300 500m
SCALE
JAKOBSTAD
DEPTHS IN METRES


OY Metsa Botnia AB
Adskar
Fishing Port
Post Office
Harbour Master and Customs
Kasko Wood OY
7.0 m.
Kaskisten Puutavara OY
7.9 m.
KASKO
DEPTHS IN METRES
Salgrund
Boat Landing



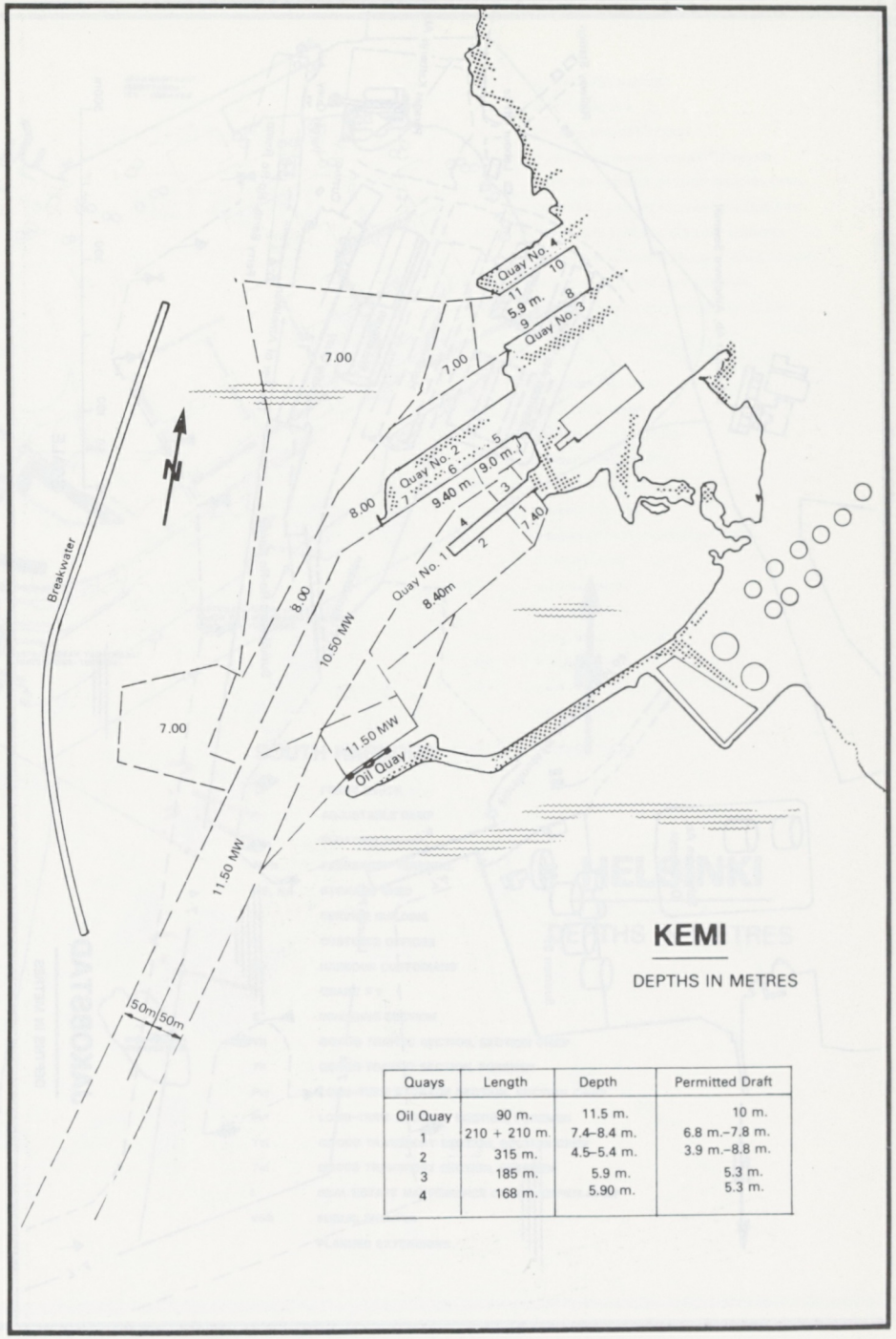
QUAYS AND MAX DRAFT

Hietanan	7.9 - 10.0m
Sunila	6.7 - 7.9m
Ruununmaanlaituri	4.0m
Puolanlaituri	8.5m
Kantasatama	
– Vanhasatama	4.9 - 6.4m
– Härniemen laituri	6.4 - 7.37m
– Pohjoislaituri	6.4 - 6.7m
– Välilaituri	5.4 - 9.0m
– Itälaituri	9.0 - 10.0m
Öljysatama	9.0 - 10.0m
Teollisuuslaiturit	
– Vassan Höyrymylly	6.4m
– Kotkan Höyryvoima Oy	
. öljylaiturai	9.0m
. hiililaituri	8.0m
– Valmet Oy	7.3m
– Kymin Oy Halla	4.2 - 7.0m

SHORE CRANES

Sunila	1 x 6t
Sunila	1 x 12t
Puolanlaituri	4 x 8t
Kantasatama	1 x 60t
"	1 x 8t
"	4 x 5t
"	6 x 3.5t
"	10 x 3t
Hietanen	1 x 40t
Teollisuussatamat	
– Kotkan Höyryvoima Oy	2 x 8t
Valmet Oy	1 x 8t

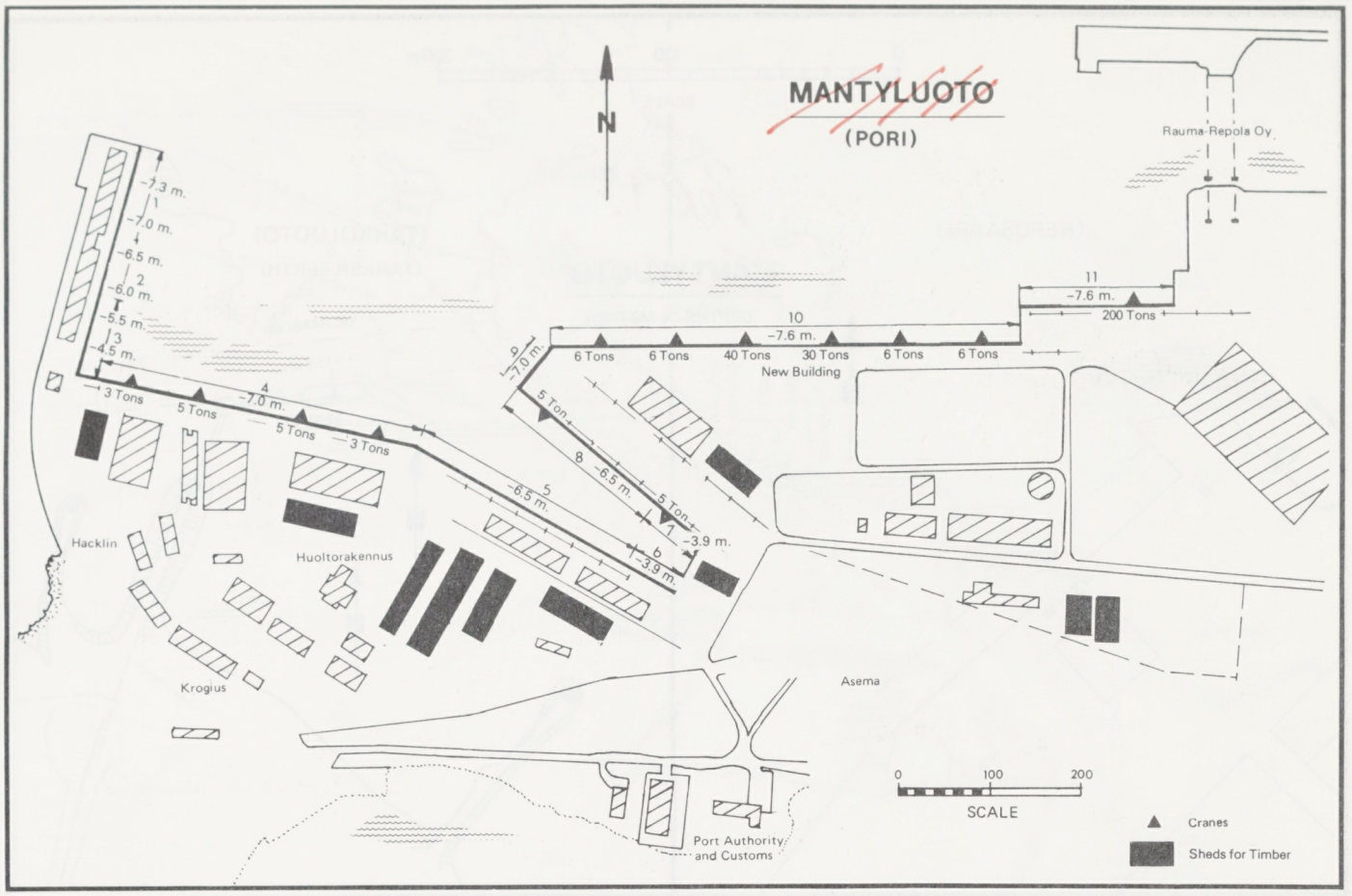
KOTKA

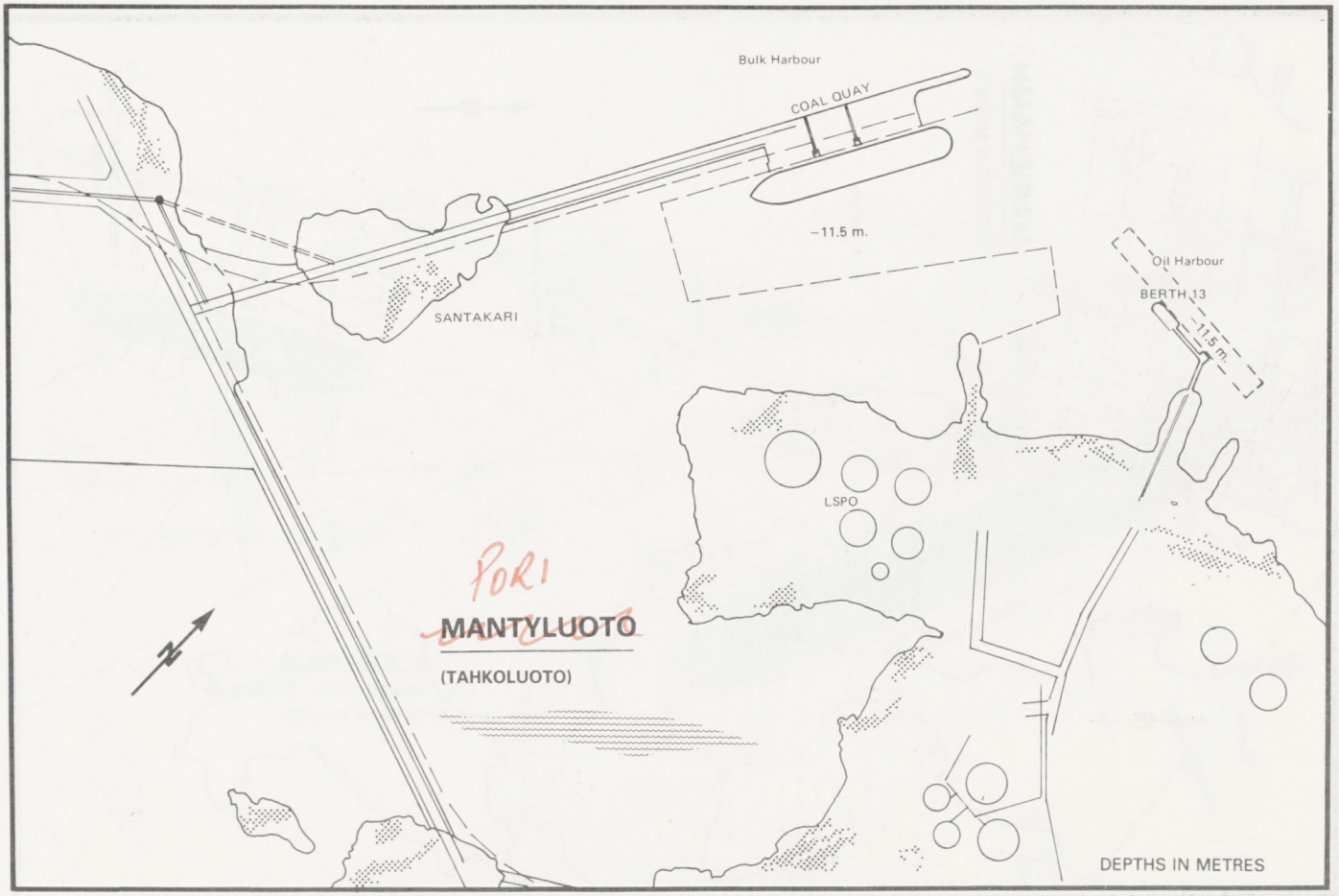


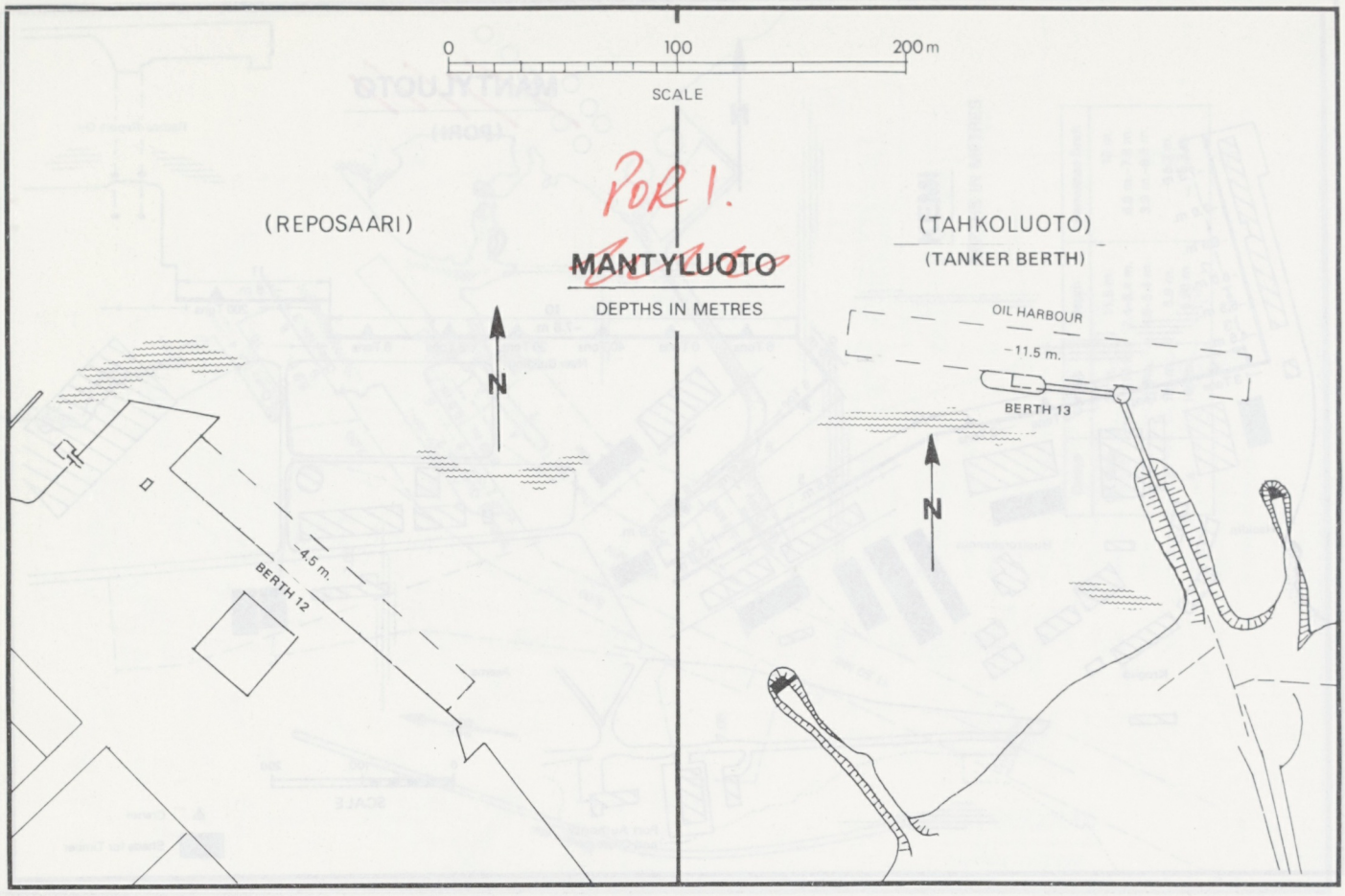
KEMI

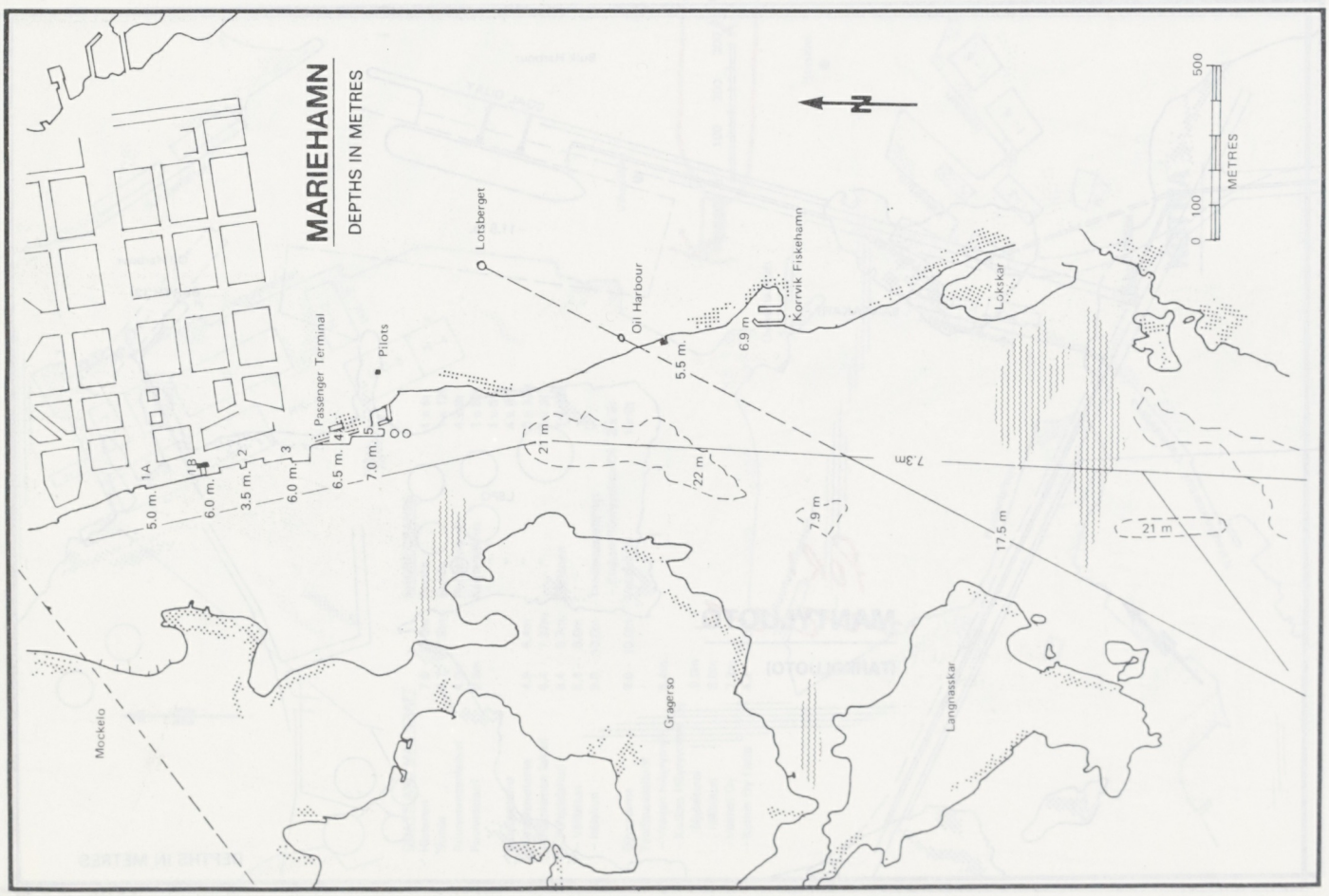
DEPTHS IN METRES

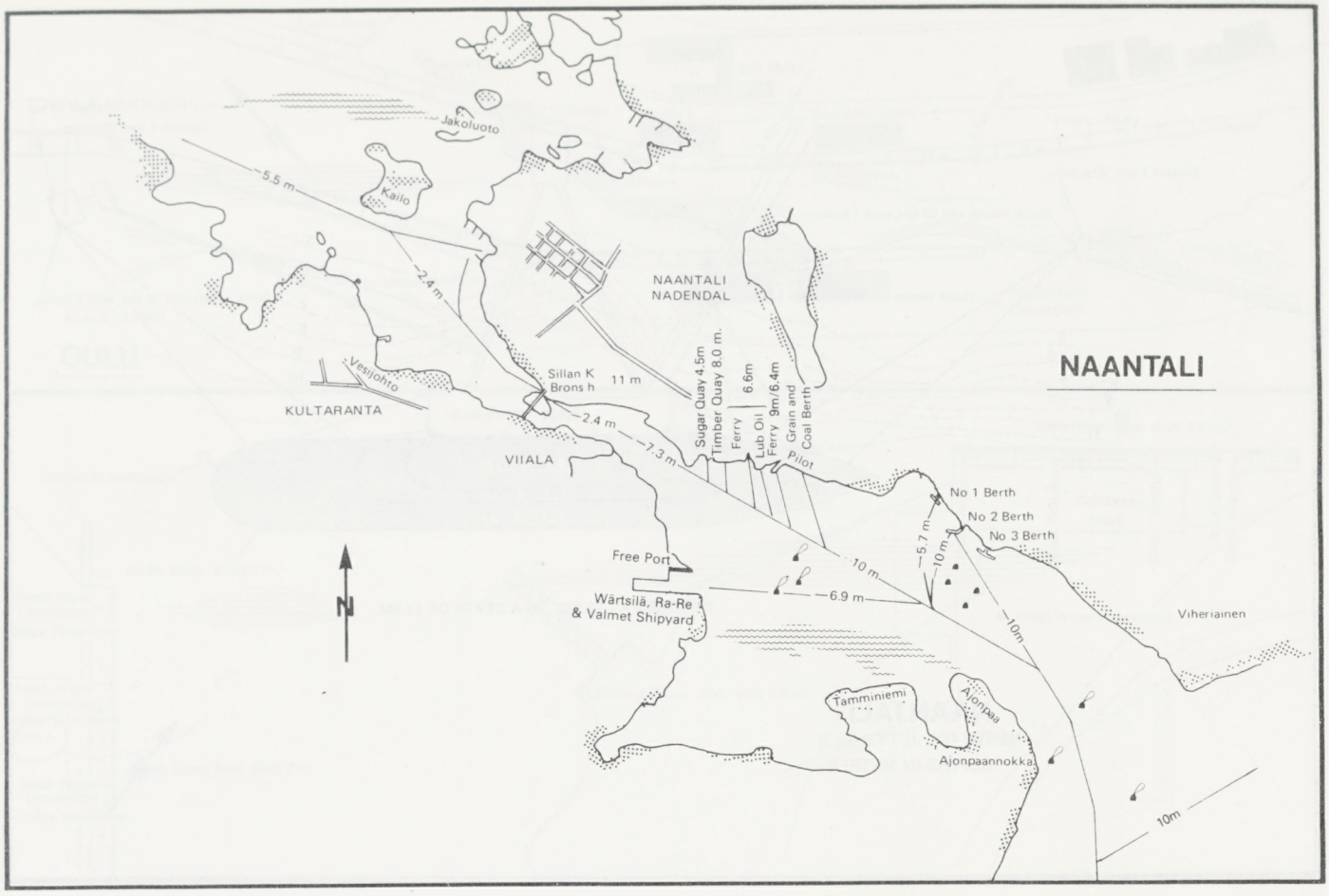
Quays	Length	Depth	Permitted Draft
Oil Quay	90 m.	11.5 m.	10 m.
1	210 + 210 m.	7.4–8.4 m.	6.8 m.–7.8 m.
2	315 m.	4.5–5.4 m.	3.9 m.–8.8 m.
3	185 m.	5.9 m.	5.3 m.
4	168 m.	5.90 m.	5.3 m.

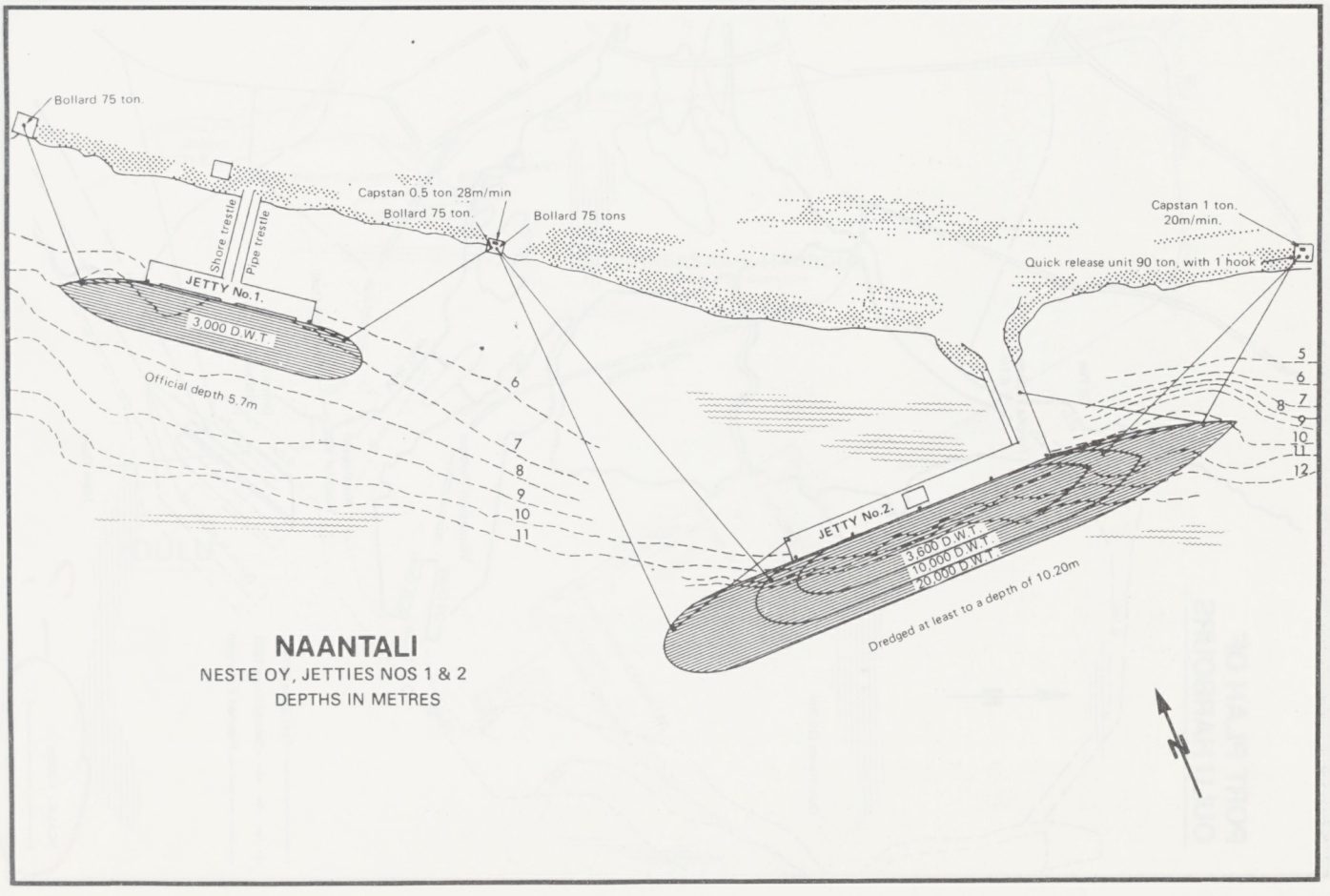

MANTYLUOTO
(PORI)
N
Rauma-Repola Oy
11
-7.6 m.
200 Tons
10
-7.6 m.
6 Tons
6 Tons
40 Tons
30 Tons
6 Tons
6 Tons
New Building
9
-7.0 m.
5 Ton
8
-6.5 m.
5 Ton
1
-3.9 m.
6
-3.9 m.
4
-7.0 m.
3 Tons
5 Tons
5 Tons
3 Tons
5
-6.5 m.
-7.3 m.
1
-7.0 m.
-6.5 m.
2
-6.0 m.
-5.5 m.
3
-4.5 m.
Hacklin
Huoltorakennus
Krogius
Asema
Port Authority
and Customs
0
100
200
SCALE
Cranes
Sheds for Timber


Bulk Harbour
COAL QUAY
-11.5 m.
Oil Harbour
BERTH 13
11.5 m.
SANTAKARI
LSPO
PORI
MANTYLUOTO
(TAHKOLUOTO)
N
DEPTHS IN METRES


0
100
200 m
SCALE
(REPOSAARI)
MANTYLUOTO
DEPTHS IN METRES
(TAHKOLUOTO)
(TANKER BERTH)
OIL HARBOUR
-11.5 m.
BERTH 13
N
-4.5 m.
BERTH 12
N


MARIEHAMN
DEPTHS IN METRES
N
500
100
0
METRES
Lotsberget
Oil Harbour
Korrvik Fiskehamn
Lökskar
Passenger Terminal
Pilots
1A
1B
2
3
4
5
5.0 m.
6.0 m.
3.5 m.
6.0 m.
6.5 m.
7.0 m.
5.5 m.
6.9 m
21 m
22 m
7.9 m
17.5 m
7.3m
21 m
Mockelo
Gragerso
Langnasskar

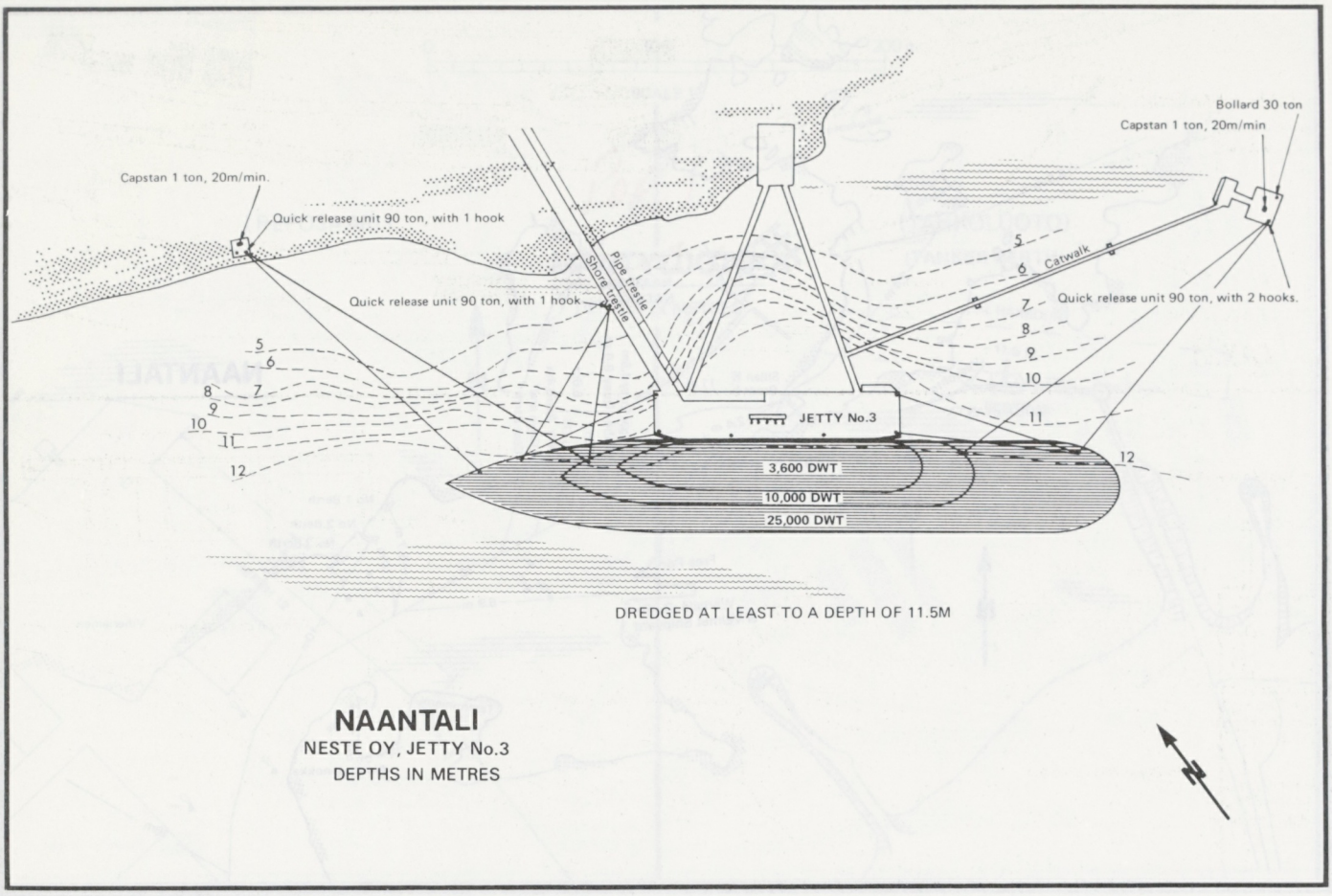


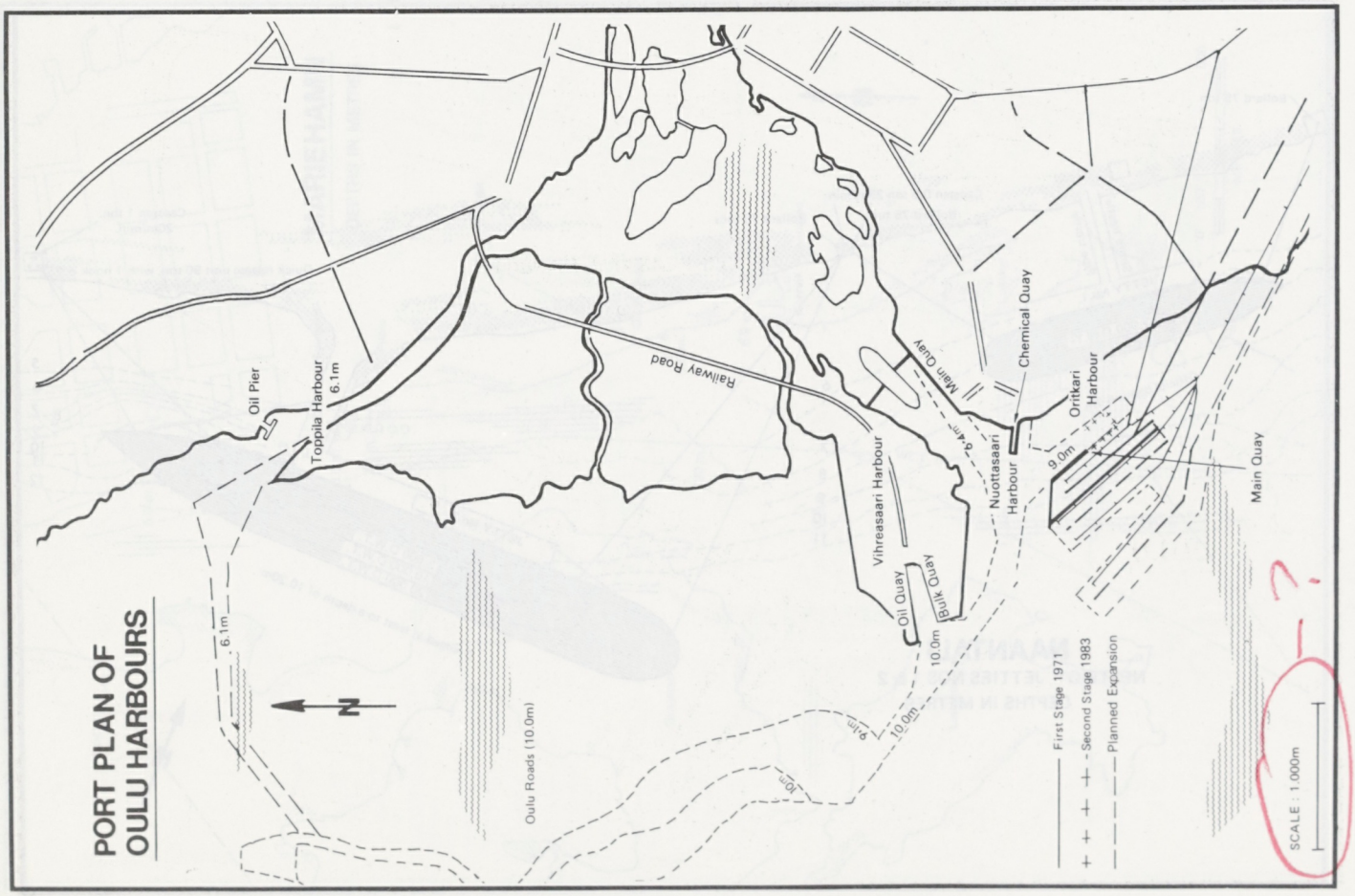


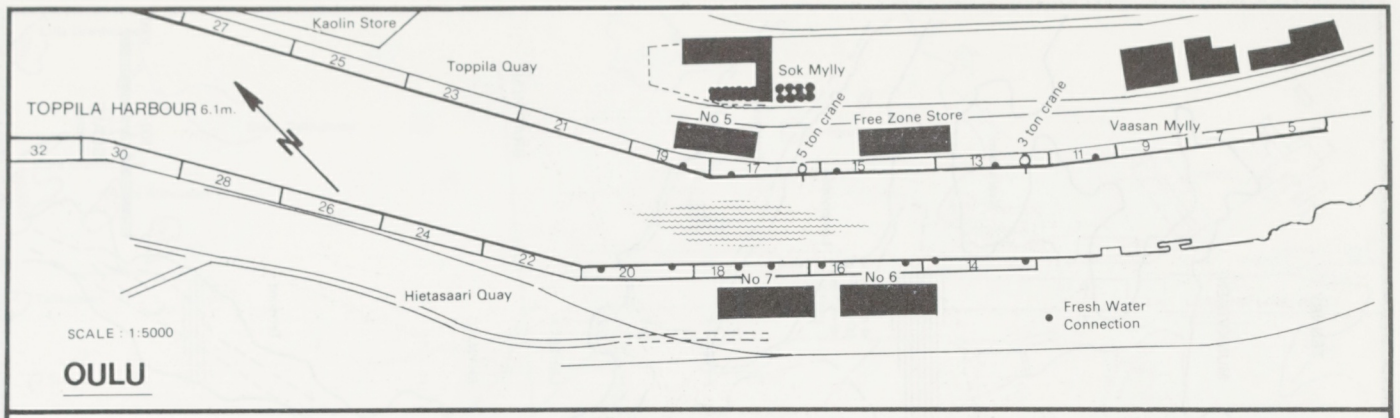
NAANTALI

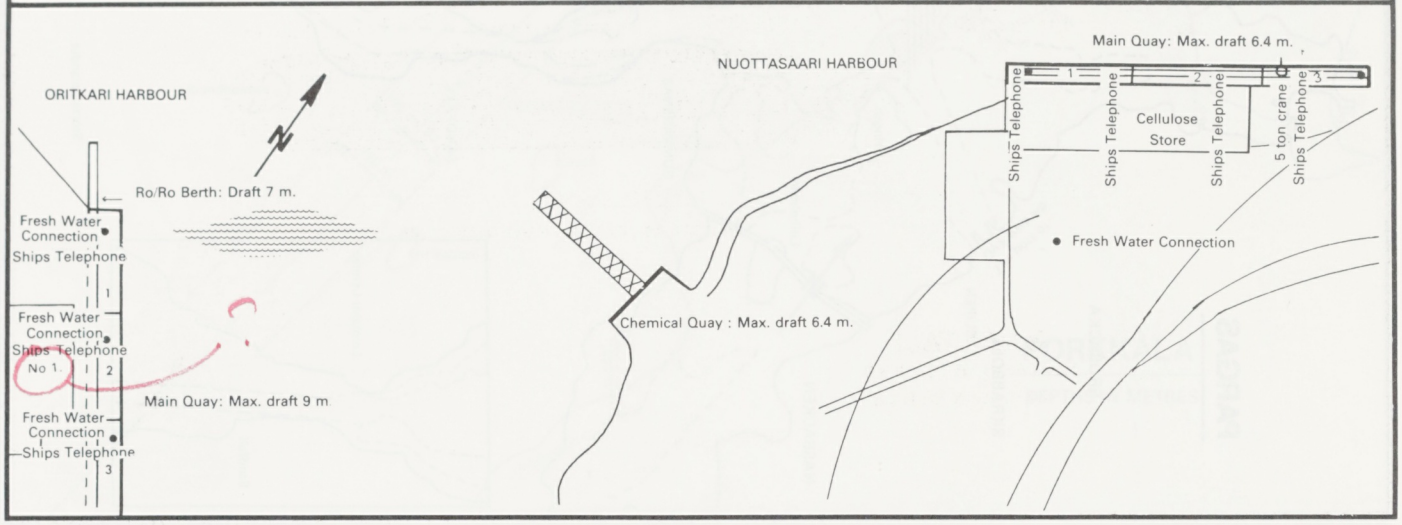
NESTE OY, JETTIES NOS 1 & 2

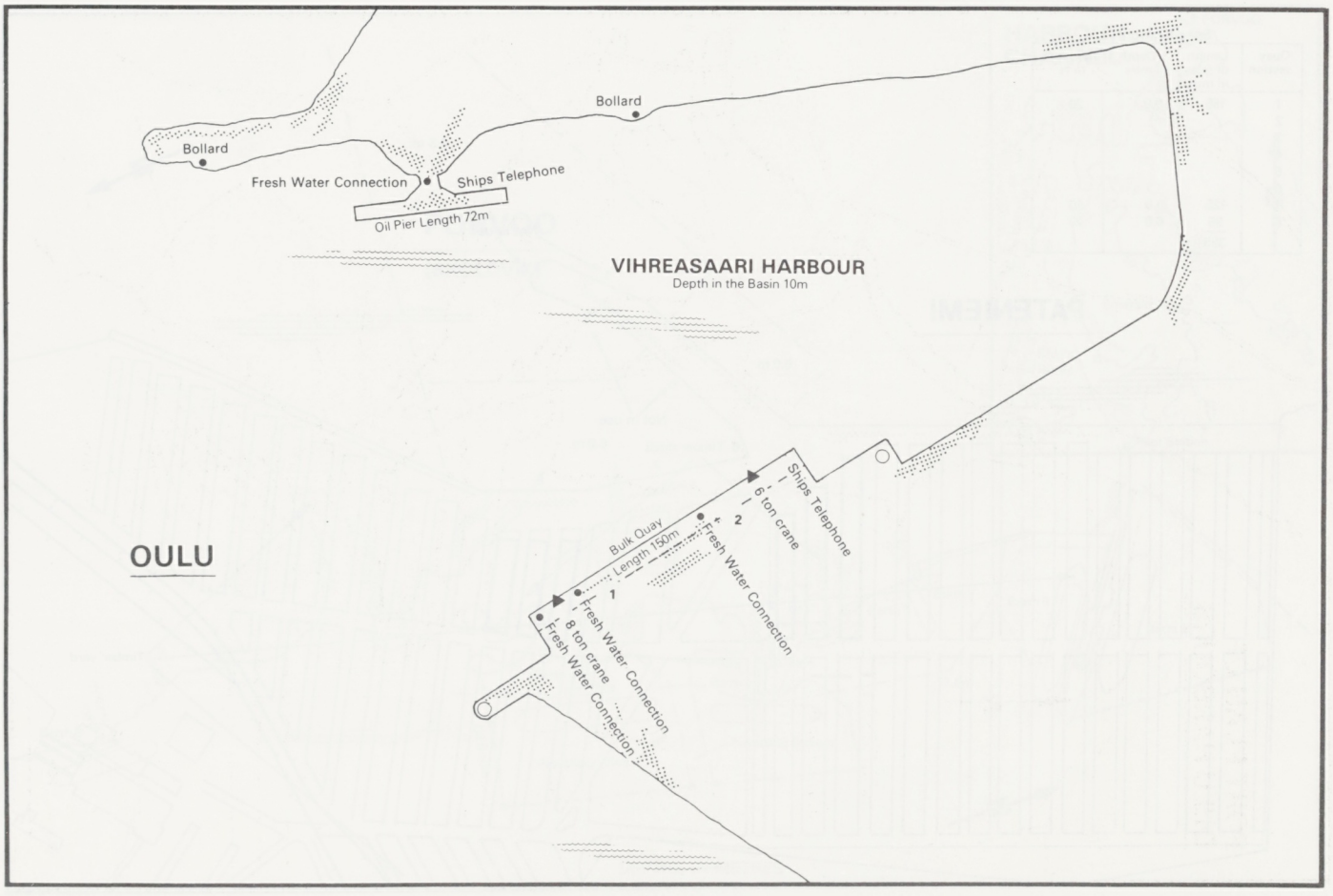
DEPTHS IN METRES

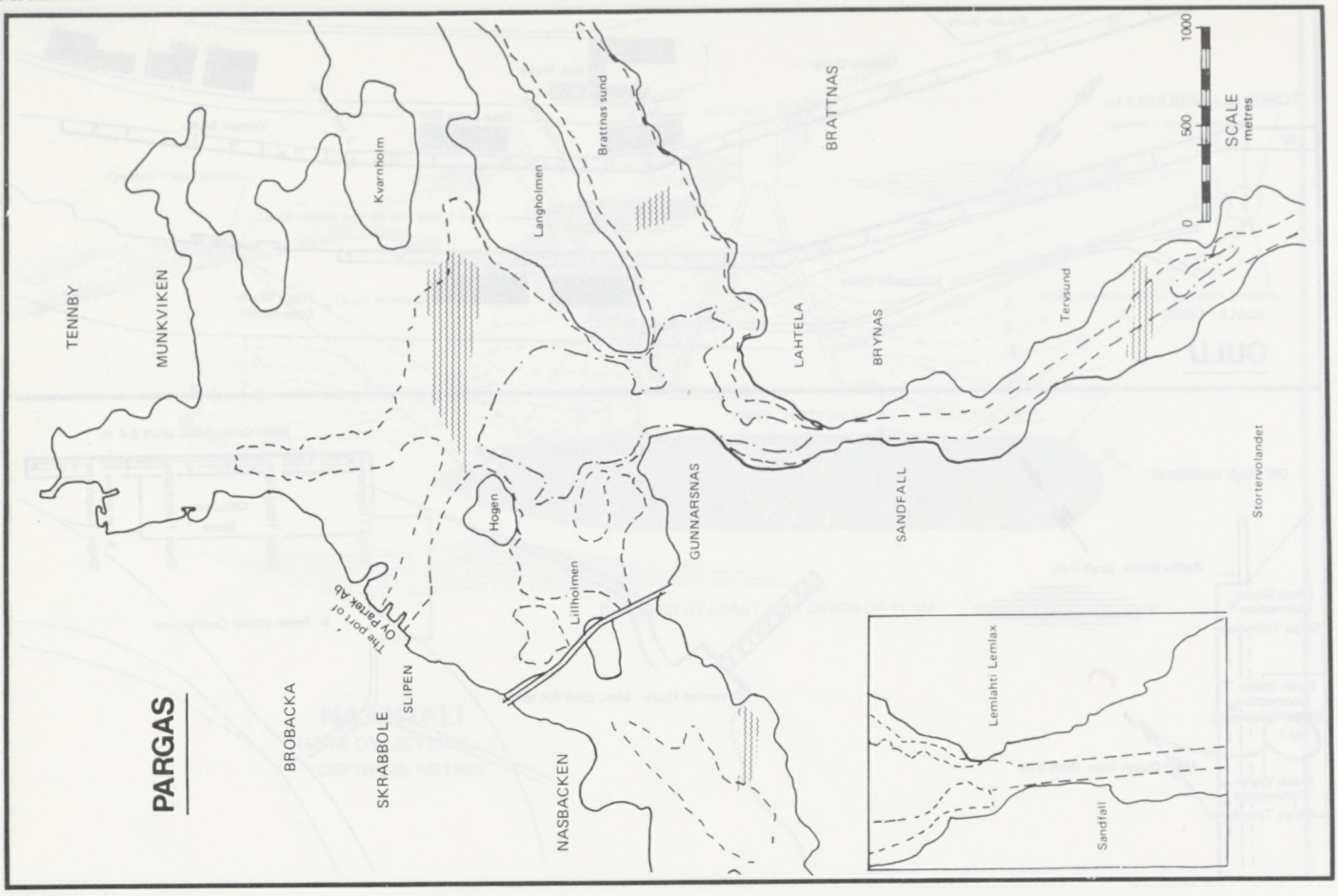

Bollard 30 ton
Capstan 1 ton, 20m/min
Capstan 1 ton, 20m/min.
Quick release unit 90 ton, with 1 hook
Shore trestle
Pipe trestle
Quick release unit 90 ton, with 1 hook
Catwalk
Quick release unit 90 ton, with 2 hooks.
JETTY No.3
3,600 DWT
10,000 DWT
25,000 DWT
DREDGED AT LEAST TO A DEPTH OF 11.5M
NAANTALI
NESTE OY, JETTY No.3
DEPTHS IN METRES

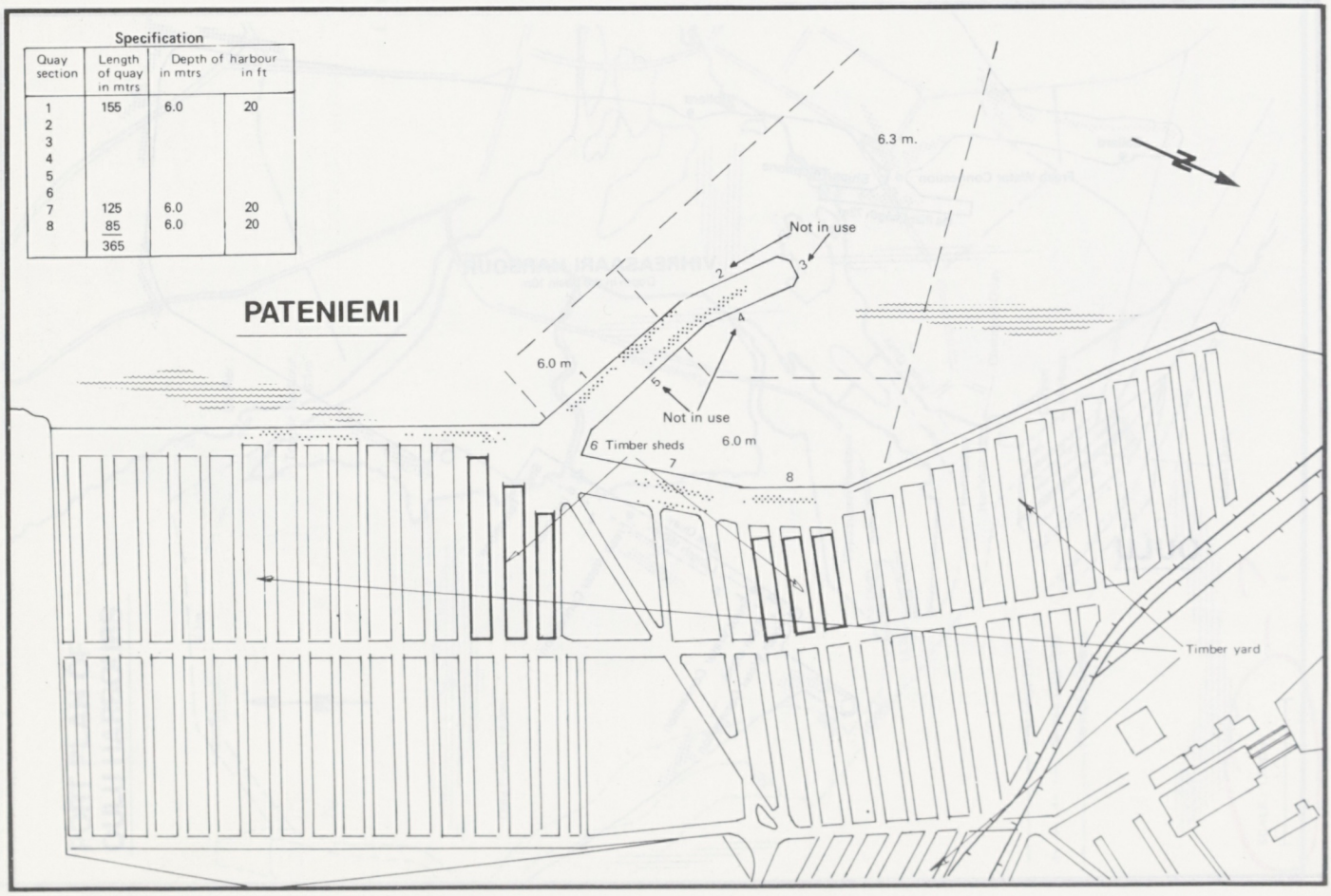

PORT PLAN OF OULU HARBOURS
Oil Pier
Toppila Harbour
6.1m
Railway Road
Main Quay
Chemical Quay
Oritkari Harbour
9.0m
Nuottasaari Harbour
Vihreasaari Harbour
Oil Quay
Kaivo Quay
10.0m
Main Quay
6.1m
Oulu Roads (10.0m)
First Stage 1971
Second Stage 1983
Planned Expansion
SCALE : 1:000m

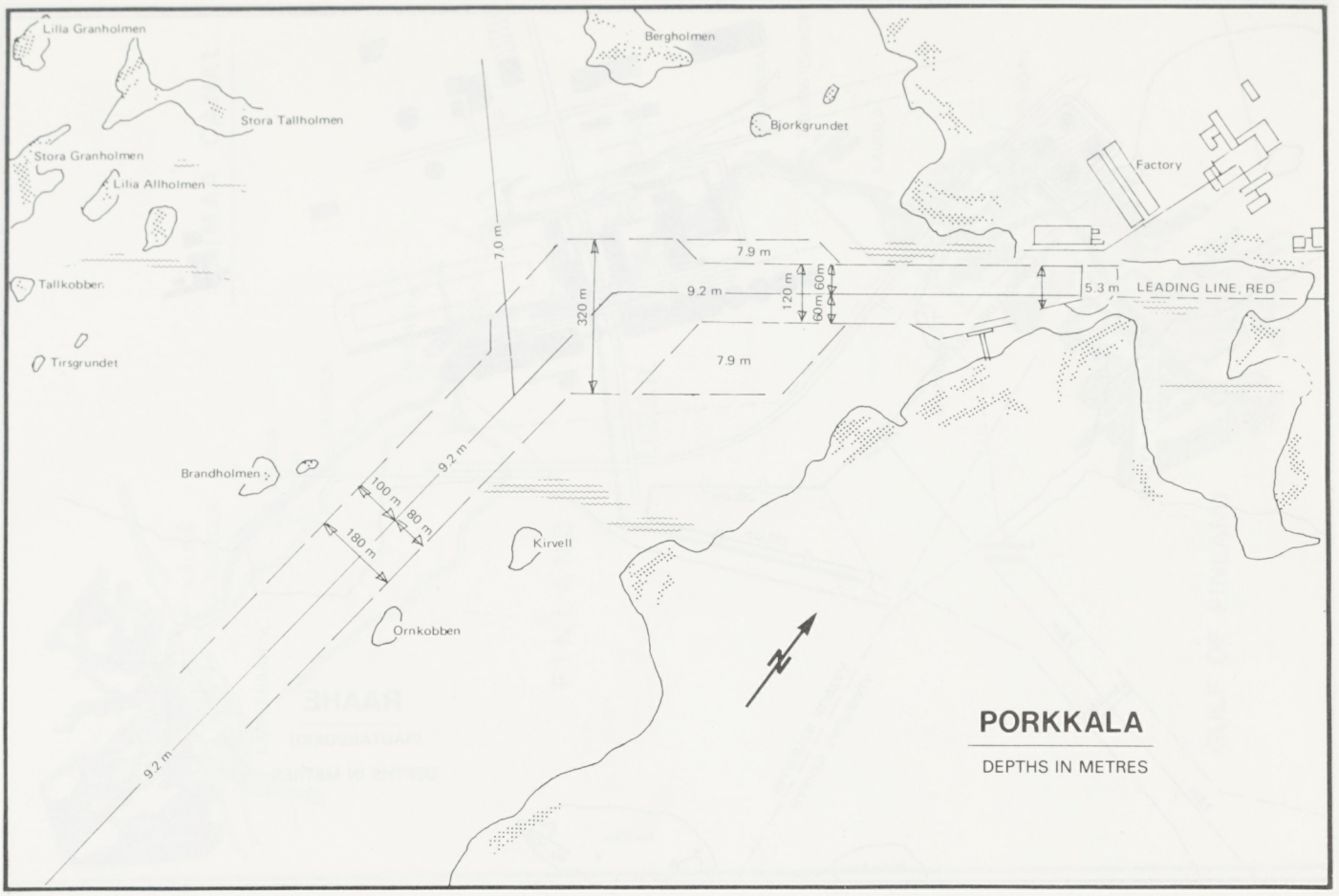

TOPPILA HARBOUR 6.1m.
Kaolin Store
Toppila Quay
Sok Mylly
No 5
5 ton crane
Free Zone Store
3 ton crane
Vaasan Mylly
Hietasaari Quay
No 7
No 6
Fresh Water Connection
SCALE : 1:5000
OULU

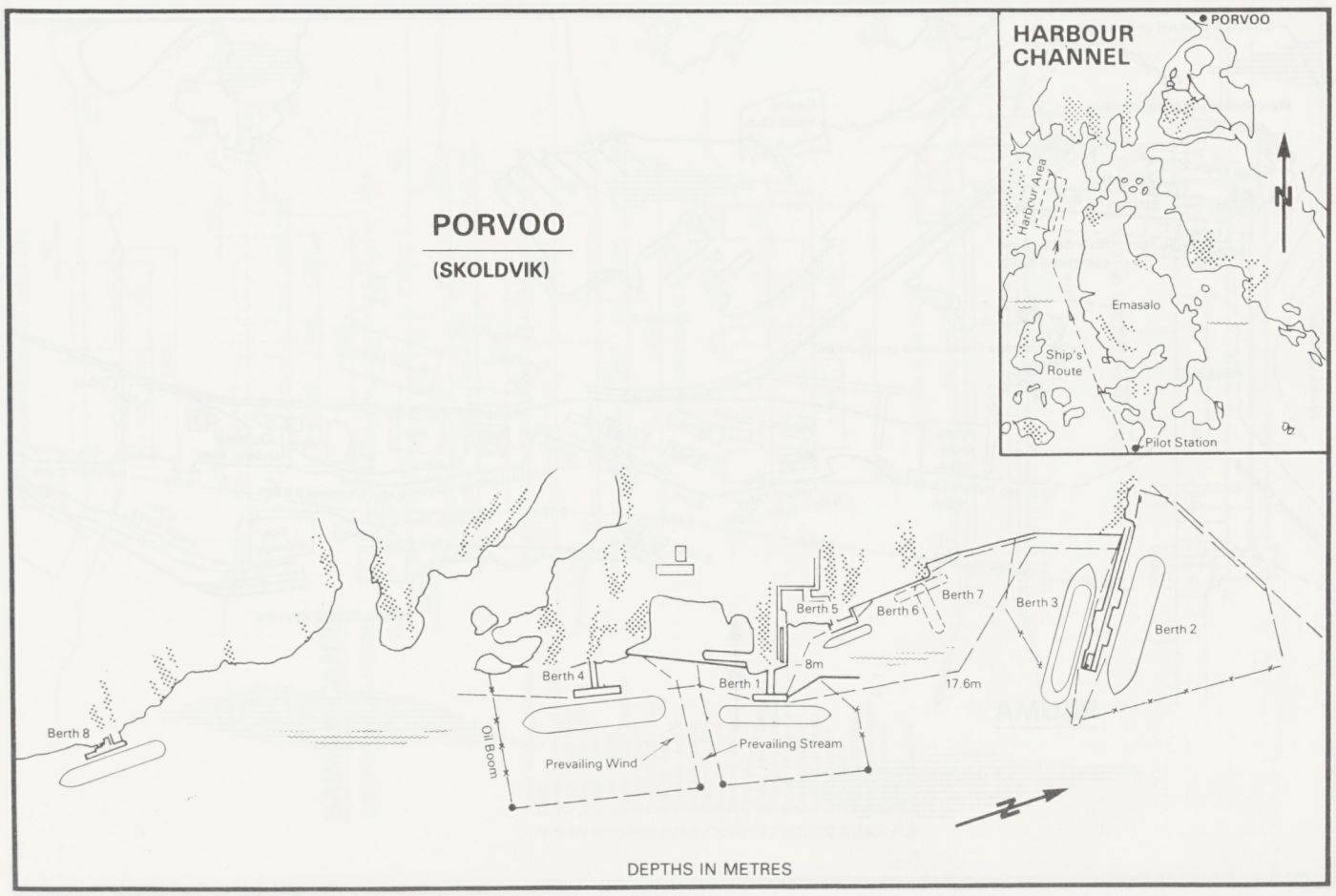

ORITKARI HARBOUR
Ro/Ro Berth: Draft 7 m.
Fresh Water Connection
Ships Telephone
No 1.
Main Quay: Max. draft 9 m
NUOTTASAARI HARBOUR
Main Quay: Max. draft 6.4 m.
Ships Telephone
Cellulose Store
5 ton crane
Fresh Water Connection
Chemical Quay : Max. draft 6.4 m.

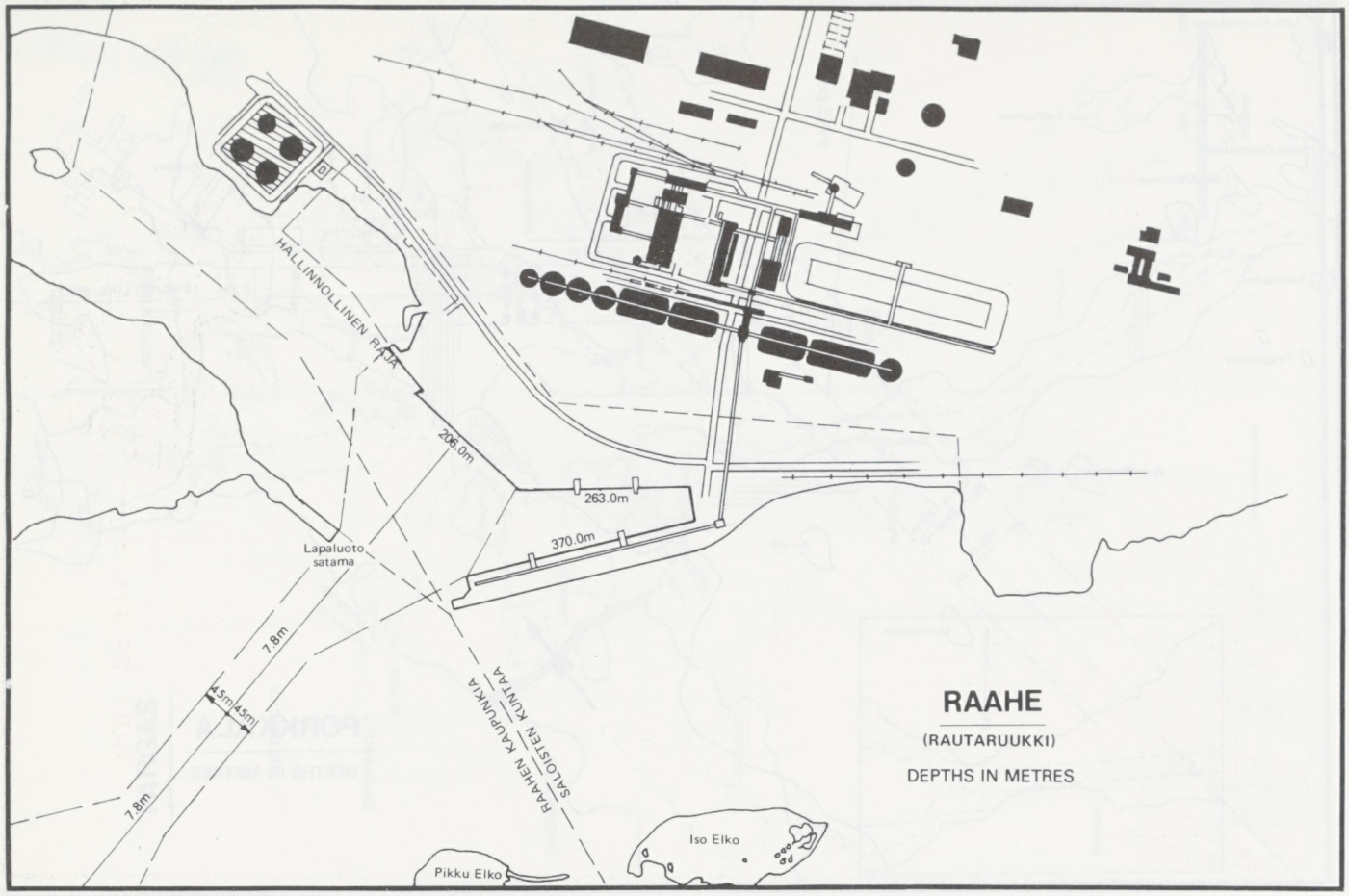

Bollard
Fresh Water Connection
Ships Telephone
Oil Pier Length 72m
VIHREASAARI HARBOUR
Depth in the Basin 10m
OULU
Bulk Quay
Length 150m
6 ton crane
8 ton crane
Fresh Water Connection

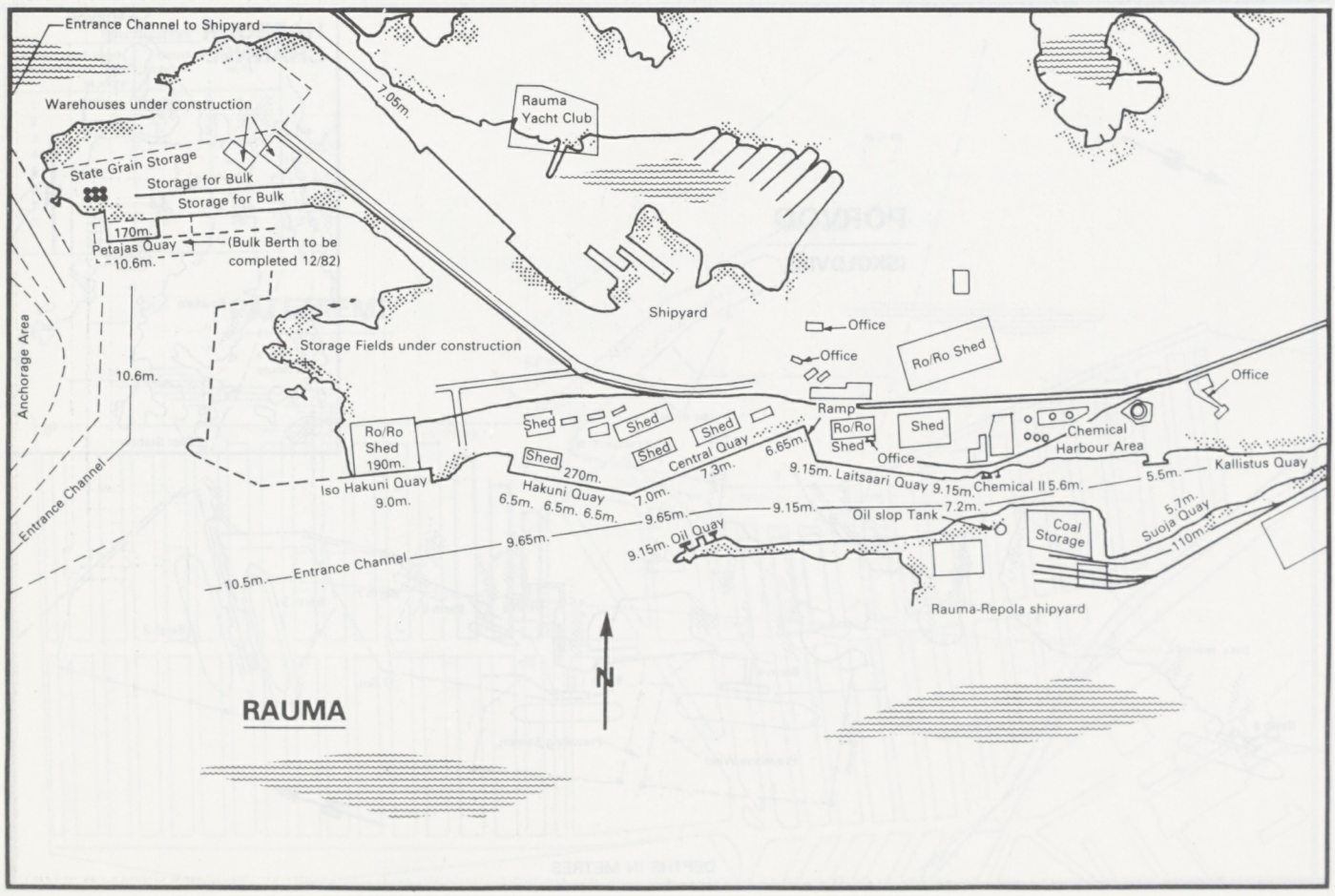

PARGAS
TENNBY
MUNKVIKEN
Kvarnholm
Langholmen
Brattnas sund
BRATTNAS
LAHTELA
BRYNAS
Tervsund
SANDFALL
Storfervolandet
GUNNARSNAS
Hogen
Lillholmen
The port of Oy Partek Ab
BROBACKA
SKRABBOLE
SLIPEN
NASBACKEN
SCALE metres
1000
500
0
Lemlahti Lemlax
Sandfall


Specification
Quay section | Length of quay in mtrs | Depth of harbour in mtrs | Depth of harbour in ft
1 | 155 | 6.0 | 20
2
3
4
5
6
7 | 125 | 6.0 | 20
8 | 85 | 6.0 | 20
365
PATENIEMI
6.3 m.
Not in use
2
3
4
6.0 m
5
Not in use
6 Timber sheds
6.0 m
7
8
Timber yard


Lilla Granholmen
Bergholmen
Stora Tallholmen
Bjorkgrundet
Stora Granholmen
Lilia Allholmen
Factory
Tallkobben
Tirsgrundet
7.0 m
7.9 m
9.2 m
320 m
120 m
60m
60m
5.3 m
LEADING LINE, RED
7.9 m
Brandholmen
9.2 m
100 m
80 m
180 m
Kirvell
Ornkobben
9.2 m
PORKKALA
DEPTHS IN METRES


PORVOO
(SKOLDVIK)
HARBOUR CHANNEL
PORVOO
Harbour Area
N
Emasalo
Ship's Route
Pilot Station
Berth 8
Berth 4
Berth 1
Berth 5
Berth 6
Berth 7
Berth 3
Berth 2
8m
17.6m
Oil Boom
Prevailing Wind
Prevailing Stream
DEPTHS IN METRES

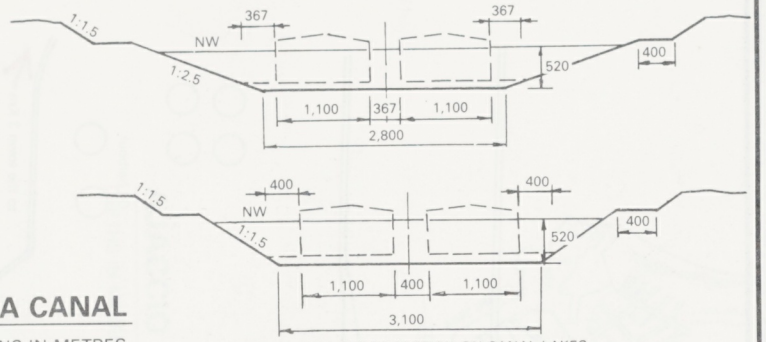

HALLINNOLLINEN RAJA
206.0m
263.0m
370.0m
Lapaluoto satama
7.8m
4.5m
4.5m
7.8m
RAAHEN KAUPUNKIA SALOISTEN KUNTAA
Iso Elko
Pikku Elko
RAAHE
(RAUTARUUKKI)
DEPTHS IN METRES


Entrance Channel to Shipyard
Warehouses under construction
7.05m.
Rauma Yacht Club
State Grain Storage
Storage for Bulk
Storage for Bulk
170m.
Petajas Quay
10.6m.
(Bulk Berth to be completed 12/82)
Shipyard
Office
Office
Ro/Ro Shed
Office
Storage Fields under construction
Anchorage Area
10.6m.
Entrance Channel
Ro/Ro Shed 190m.
Iso Hakuni Quay
9.0m.
Shed
Shed
Shed
Shed
Shed
270m.
Hakuni Quay
6.5m. 6.5m. 6.5m.
Central Quay
7.3m.
6.65m
7.0m.
Ramp
Ro/Ro Shed
Shed
Office
Chemical Harbour Area
Office
9.15m. Laitsaari Quay 9.15m.
Chemical II 5.6m.
5.5m.
Kallistus Quay
9.65m.
9.15m.
Oil slop Tank
7.2m.
9.15m. Oil Quay
9.65m.
10.5m. Entrance Channel
Coal Storage
5.7m.
Suoja Quay
110m.
Rauma-Repola shipyard
N
RAUMA

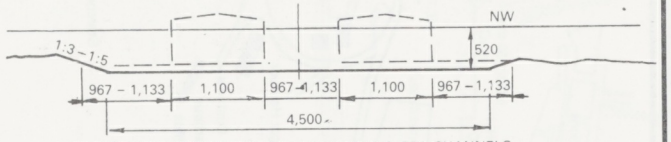
SAIMAA CANAL

DIMENSIONS IN METRES

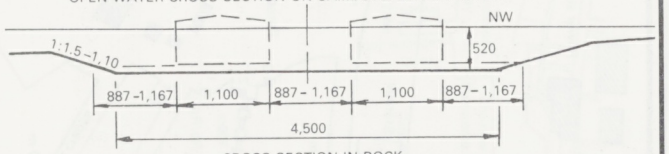
NORMAL CROSS-SECTION OF CANAL BED



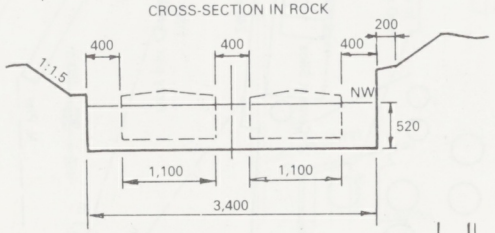
OPEN WATER CROSS-SECTION ON CANAL LAKES



OPEN WATER CROSS-SECTION ON SAIMAA & SEA CHANNELS

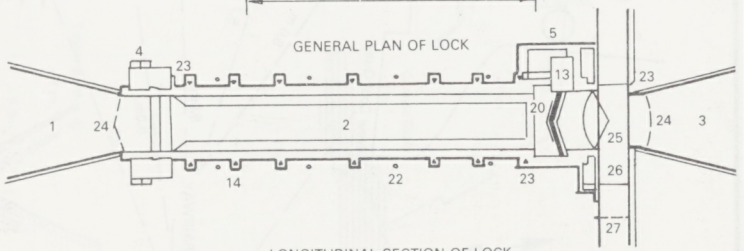


CROSS-SECTION IN ROCK

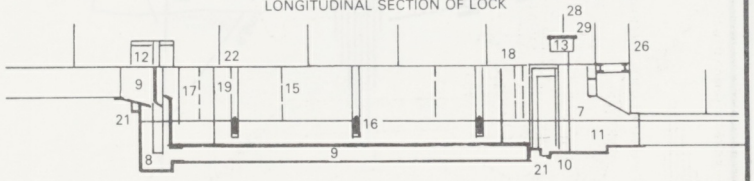


1 Upper Waiting Harbour
2 Lock
3 Lower Waiting Harbour
4 Upper Lock Head
5 Lower Lock Head
6 Upper Gate
7 Lower Gates
8 Upper Gate Chamber
9 Filling Culvert
10 Emptying Sluices
11 Stilling Basin
12 Machine Room
13 Control House
14 Stationary Bollard
15 Mooring Hook
16 Floating Bollard
17 Stop Line
18 Water Level Gauge
19 Emergency Ladder
20 Buffer of the Lower Gate
21 Cable Subway
22 Lock Illumination
23 Light Signals
24 Cofferdam
25 Bascule Bridge
26 Road Illumination
27 Road Barriers
28 Radio
29 Loudspeakers

GENERAL PLAN OF LOCK

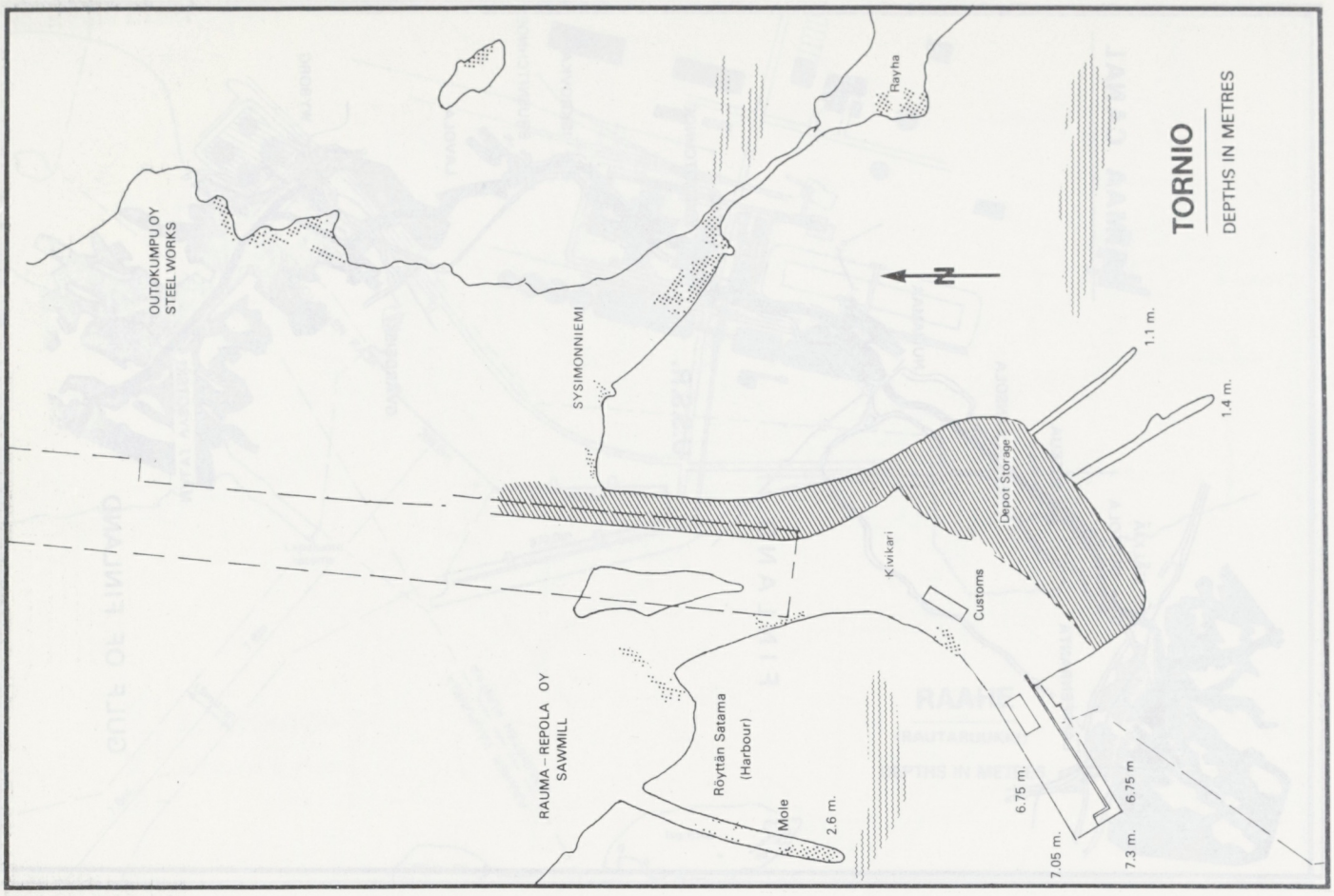


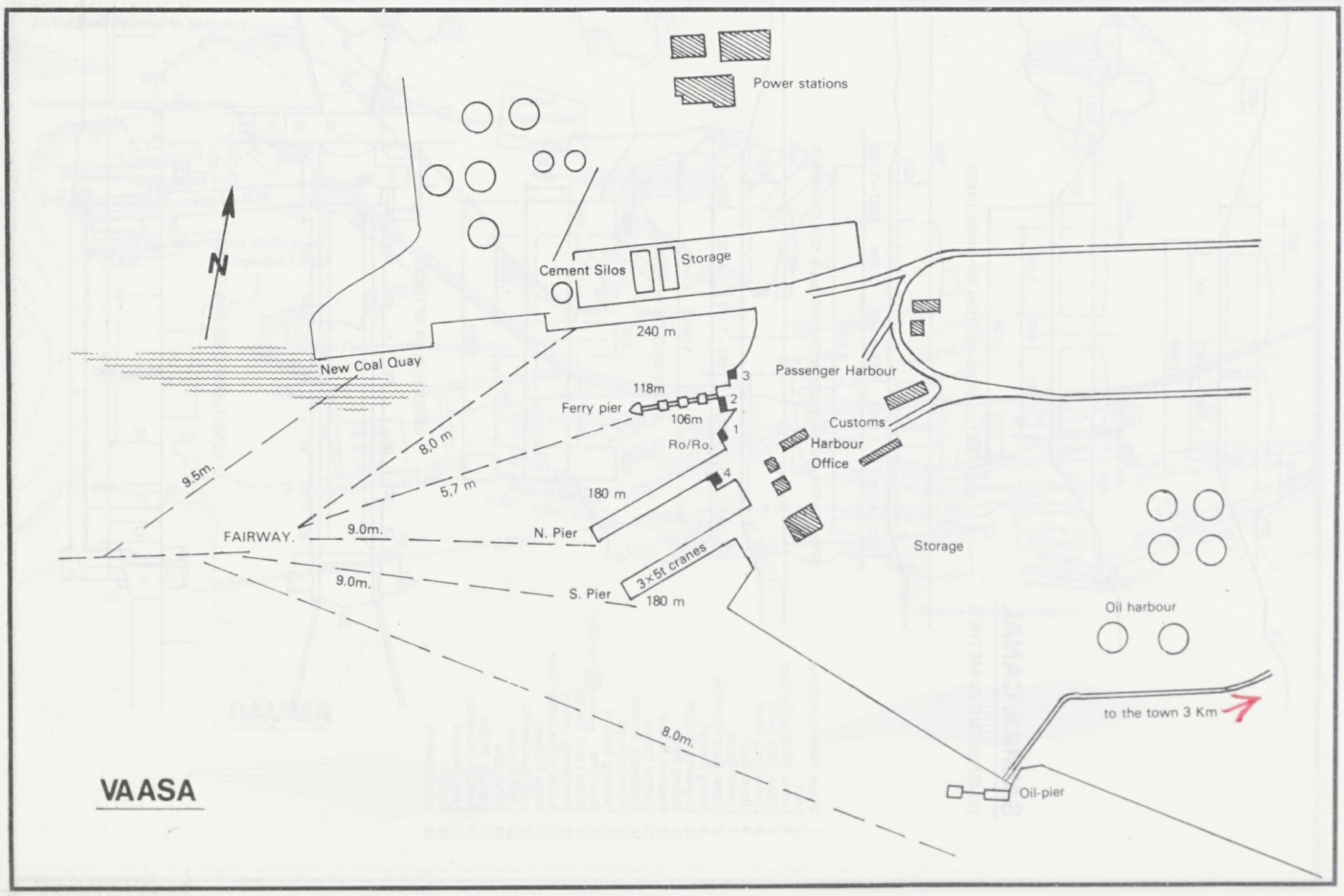
LONGITUDINAL SECTION OF LOCK

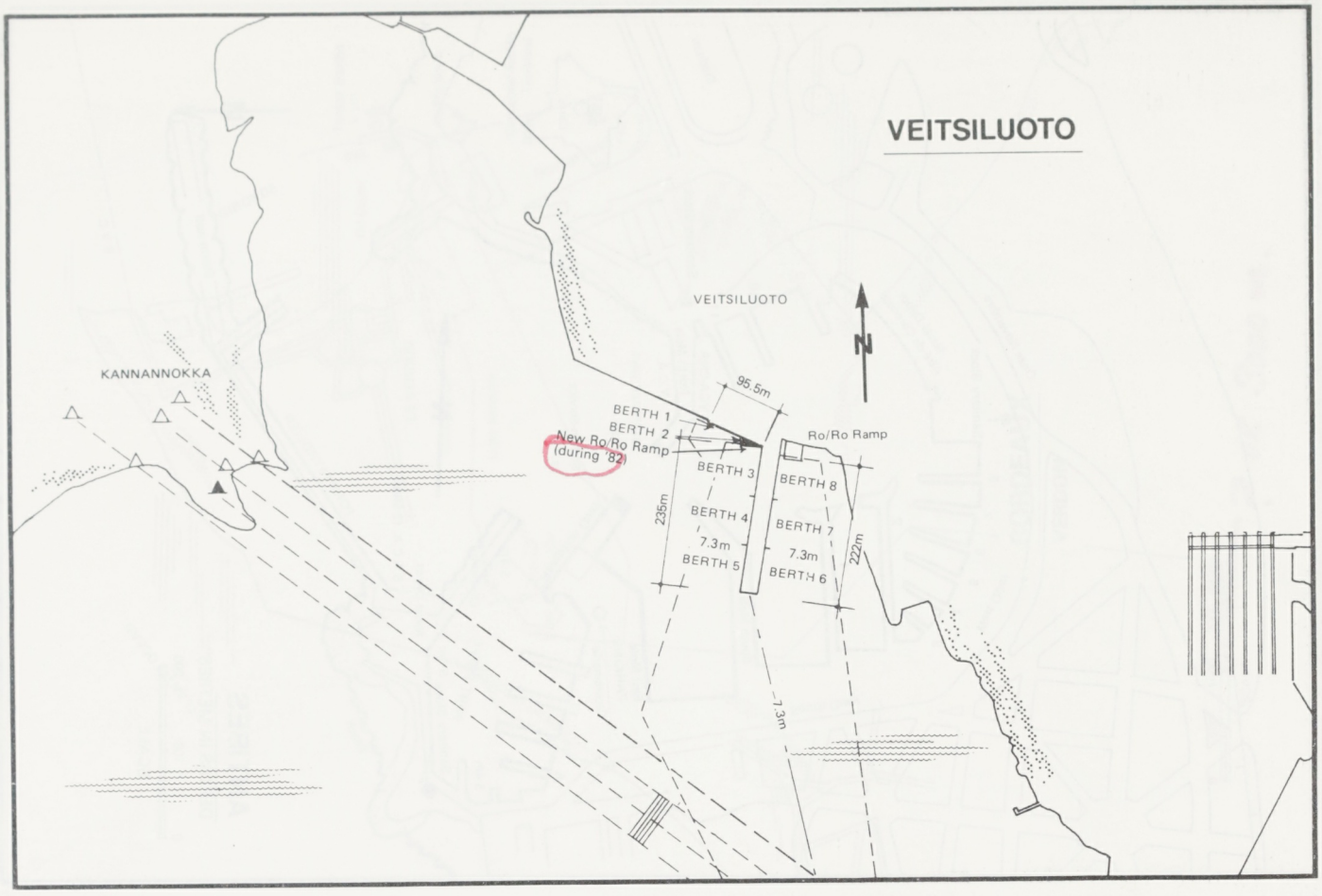


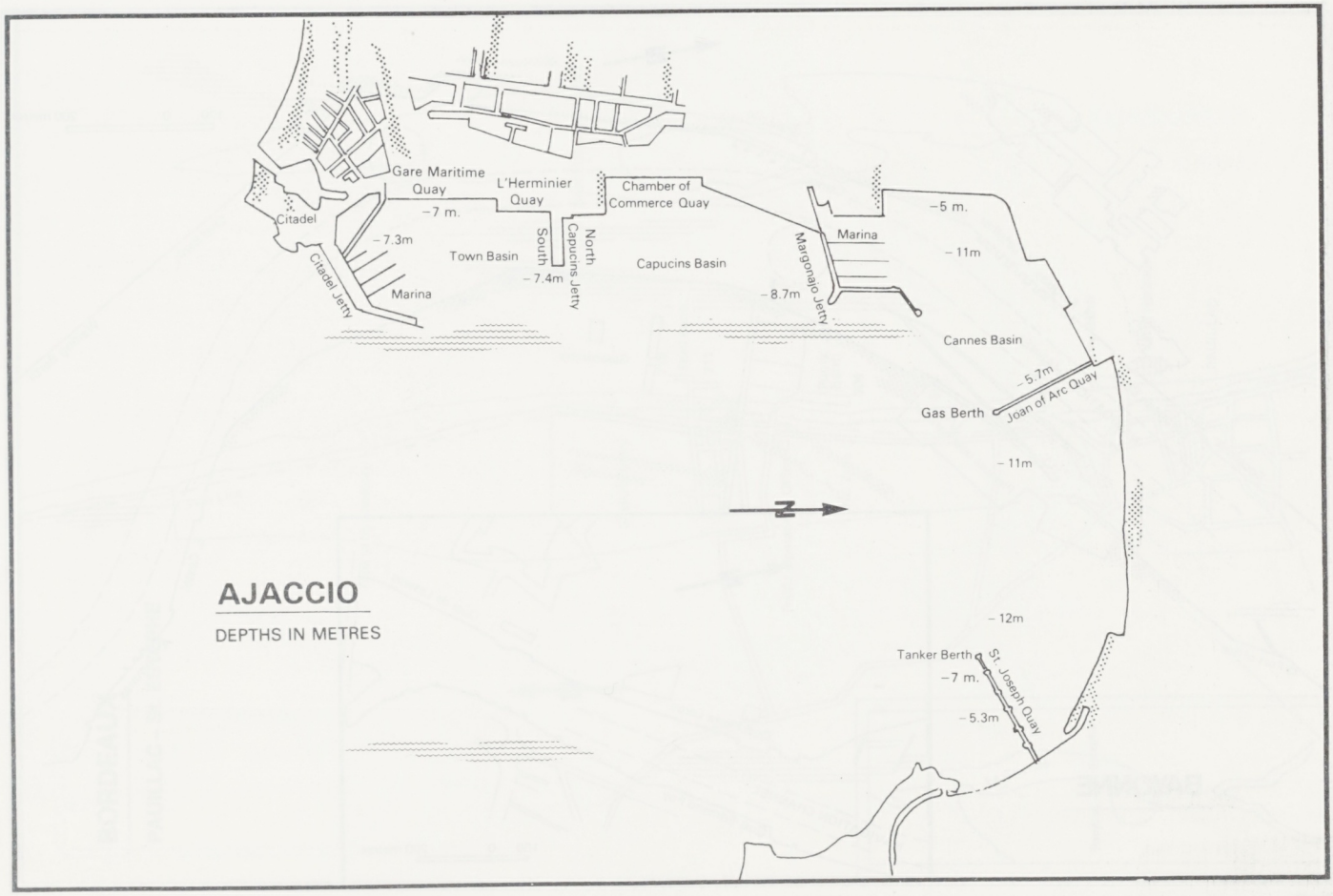
P273

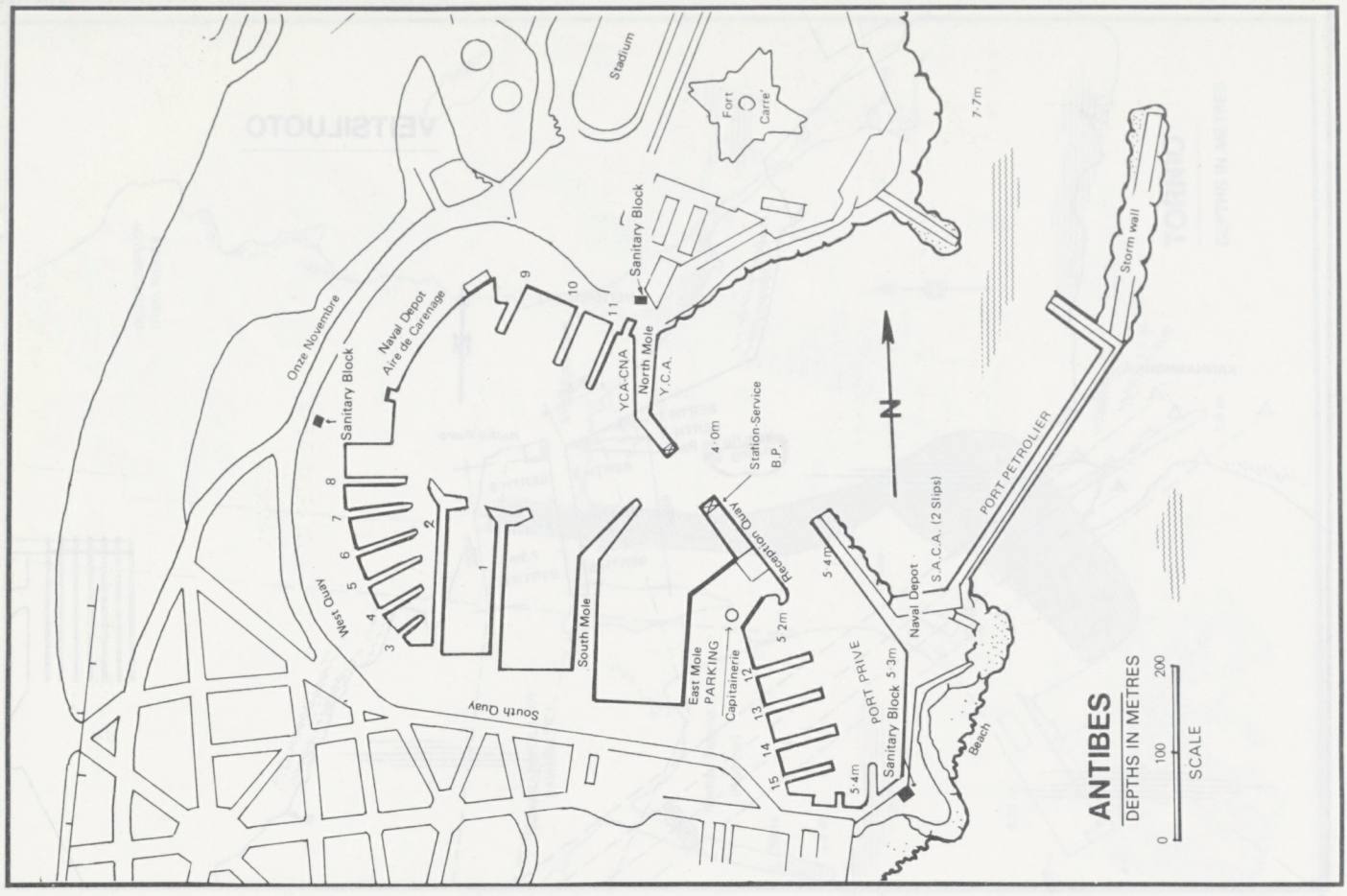
FINLAND

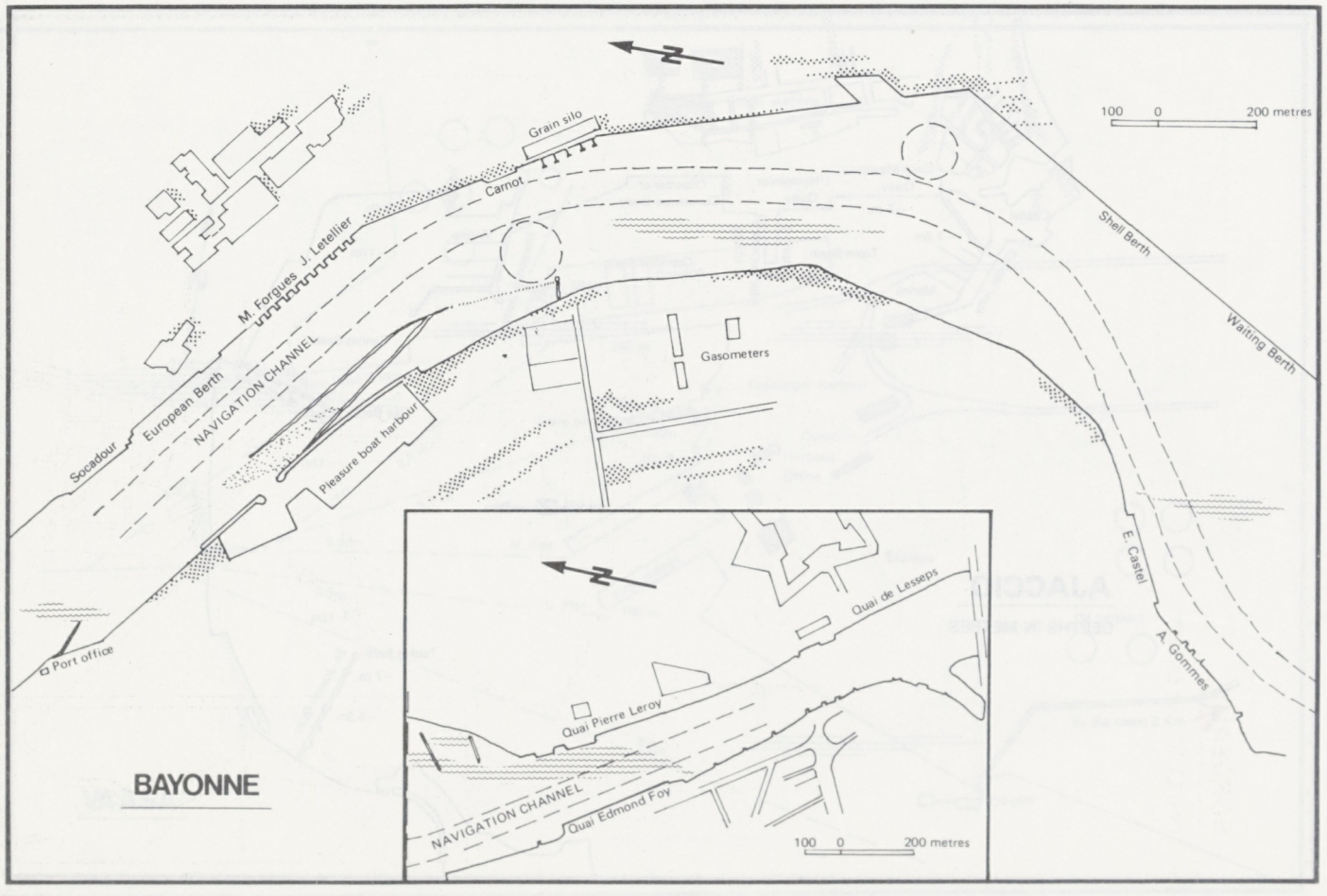

TORNIO
DEPTHS IN METRES
N
Rayha
OUTOKUMPU OY
STEEL WORKS
SYSIMONNIEMI
Kivikari
Depot Storage
Customs
RAUMA - REPOLA OY
SAWMILL
Röytän Satama
(Harbour)
Mole
2.6 m.
1.1 m.
1.4 m.
6.75 m.
6.75 m.
7.05 m.
7.3 m.

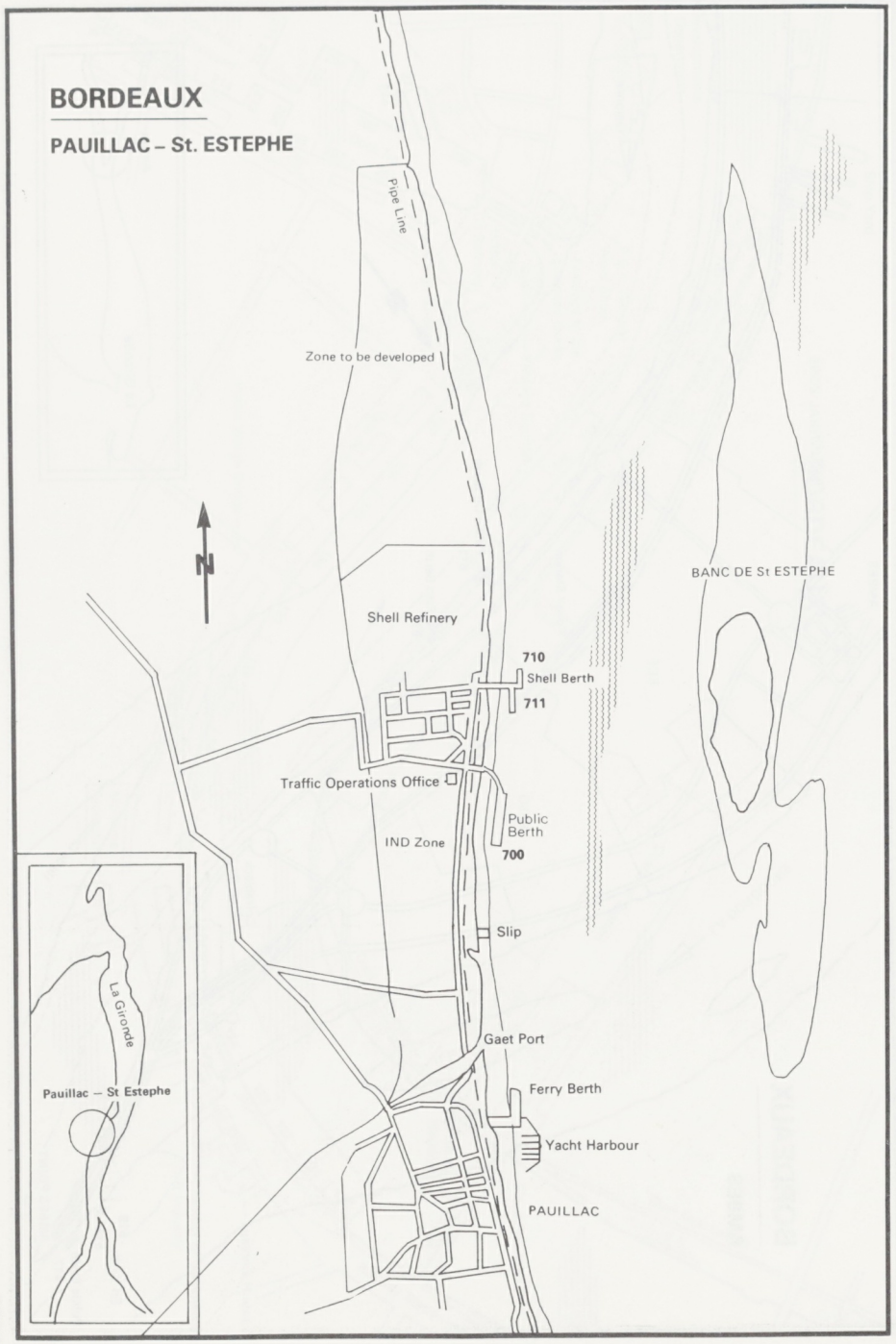

Power stations
N
Cement Silos
Storage
240 m
New Coal Quay
118m
Ferry pier
106m
Ro/Ro.
3
2
1
4
Passenger Harbour
Customs
Harbour
Office
9.5m.
8.0 m
5,7 m
180 m
FAIRWAY.
9.0m.
N. Pier
9.0m.
S. Pier
3x5t cranes
180 m
Storage
Oil harbour
to the town 3 Km
8.0m.
Oil-pier
VAASA

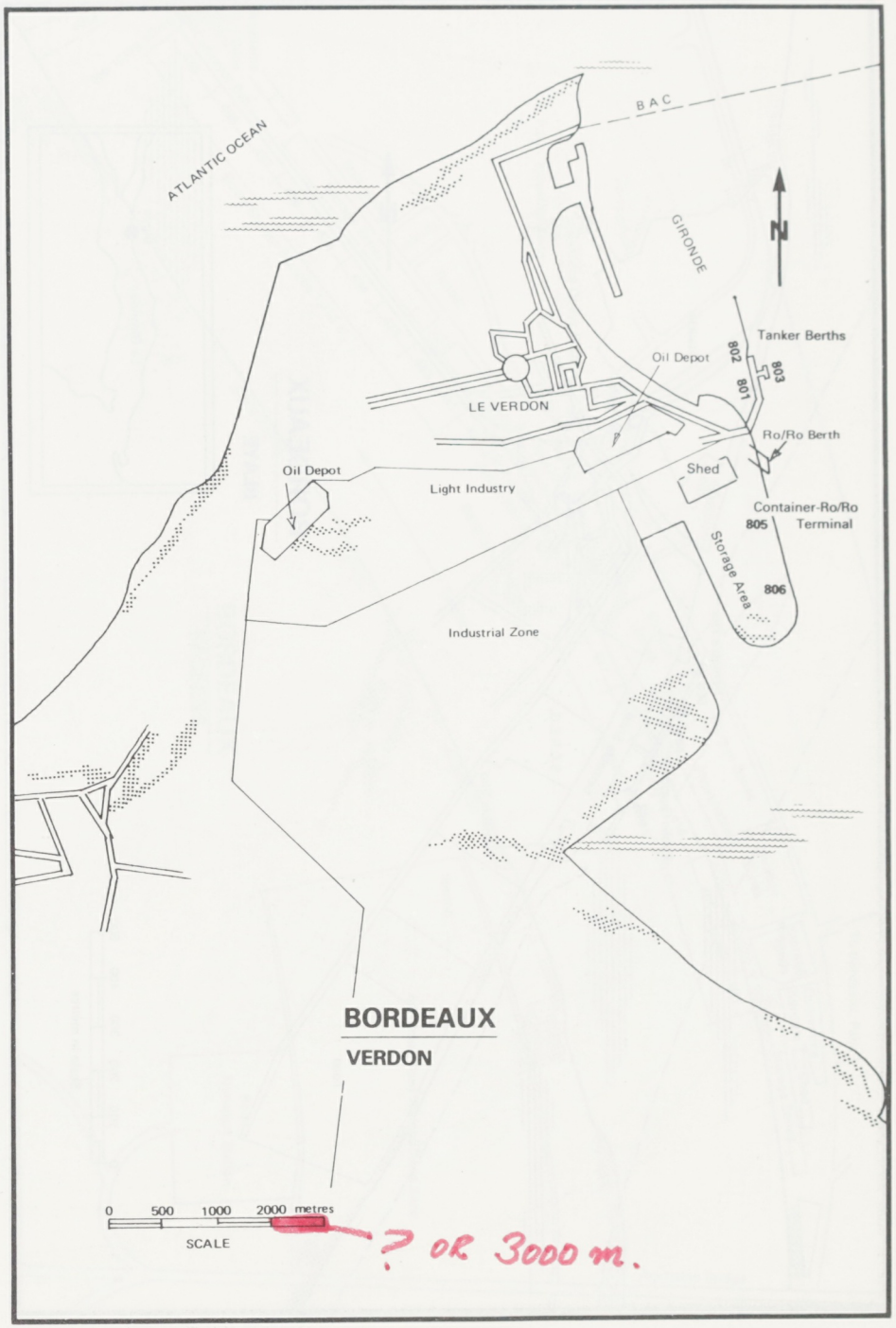

VEITSILUOTO
VEITSILUOTO
KANNANNOKKA
N
95.5m
BERTH 1
BERTH 2
New Ro Ro Ramp
(during '82)
Ro/Ro Ramp
BERTH 3
BERTH 8
235m
BERTH 4
BERTH 7
7.3m
7.3m
BERTH 5
BERTH 6
222m
7.3m

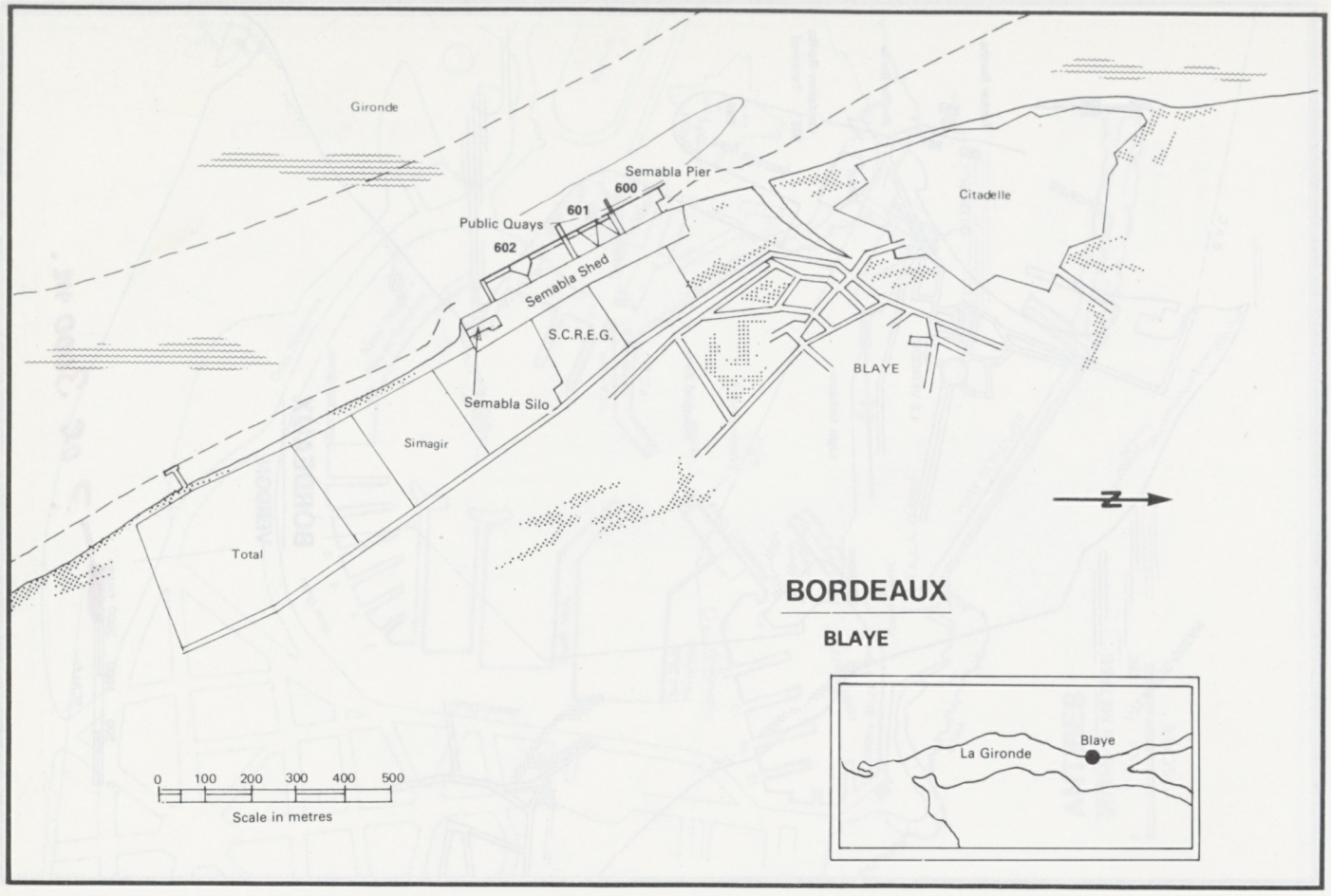

Gare Maritime Quay
L'Herminier Quay
Chamber of Commerce Quay
–7 m.
Citadel
– 7.3m
Town Basin
South
North
Capucins Jetty
– 7.4m
Capucins Basin
Marina
Margonajo Jetty
–8.7m
–5 m.
– 11m
Cannes Basin
– 5.7m
Joan of Arc Quay
Gas Berth
– 11m
Citadel Jetty
Marina
N
AJACCIO
DEPTHS IN METRES
– 12m
Tanker Berth
St. Joseph Quay
–7 m.
– 5.3m

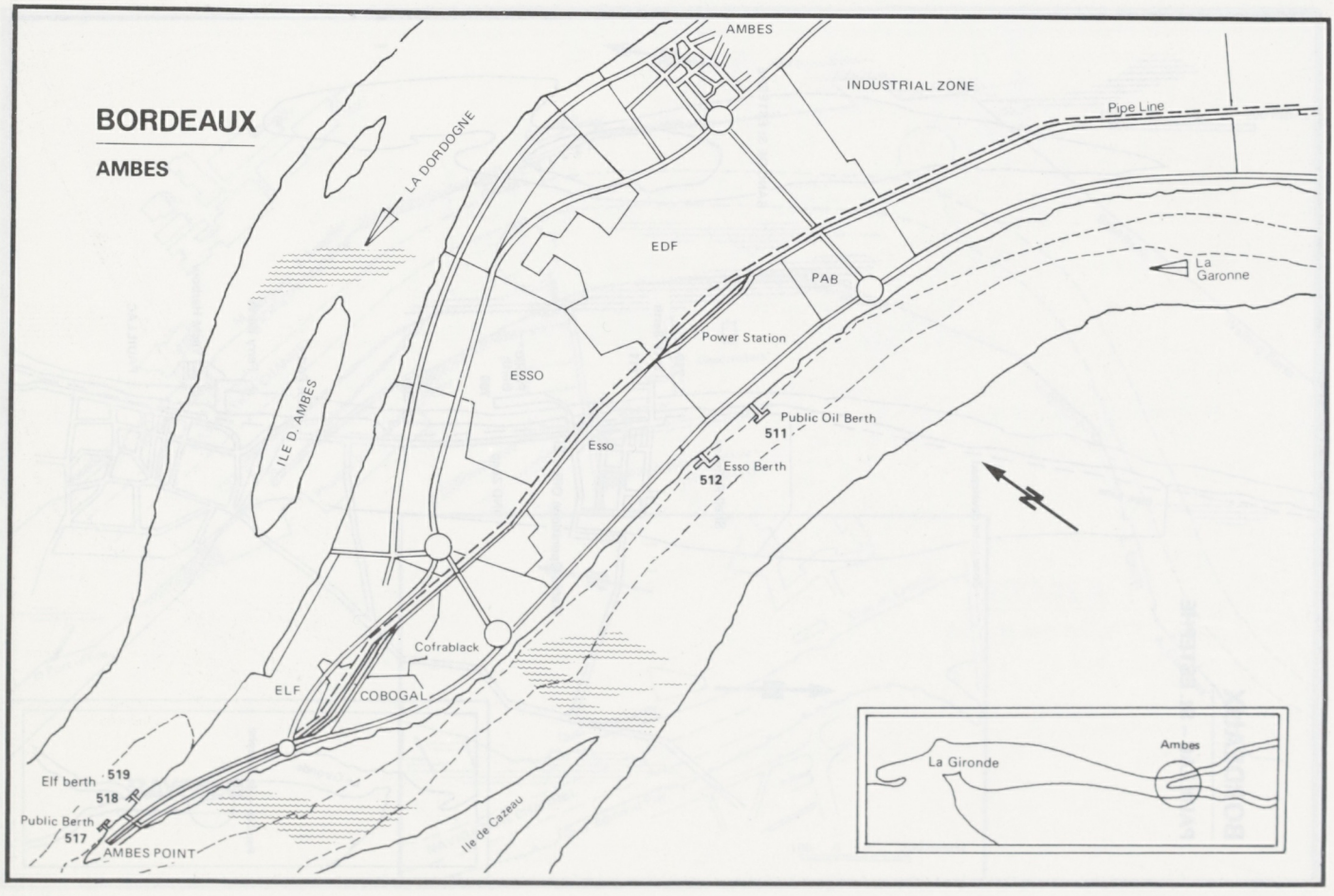

Stadium
Fort Carré
7.7m
Sanitary Block
Storm wall
Onze Novembre
Naval Depot
Aire de Carenage
9
10
11
YCA-CNA
North Mole
Y.C.A.
Sanitary Block
4·0m
Station-Service
B.P.
8
7
6
5
4
3
2
1
West Quay
South Mole
Reception Quay
5·4m
5·2m
PORT PETROLIER
S.A.C.A. (2 Slips)
Naval Depot
East Mole
PARKING
Capitainerie
12
13
14
15
PORT PRIVE
5·3m
Sanitary Block
5·4m
South Quay
Beach
ANTIBES
DEPTHS IN METRES
0
100
200
SCALE

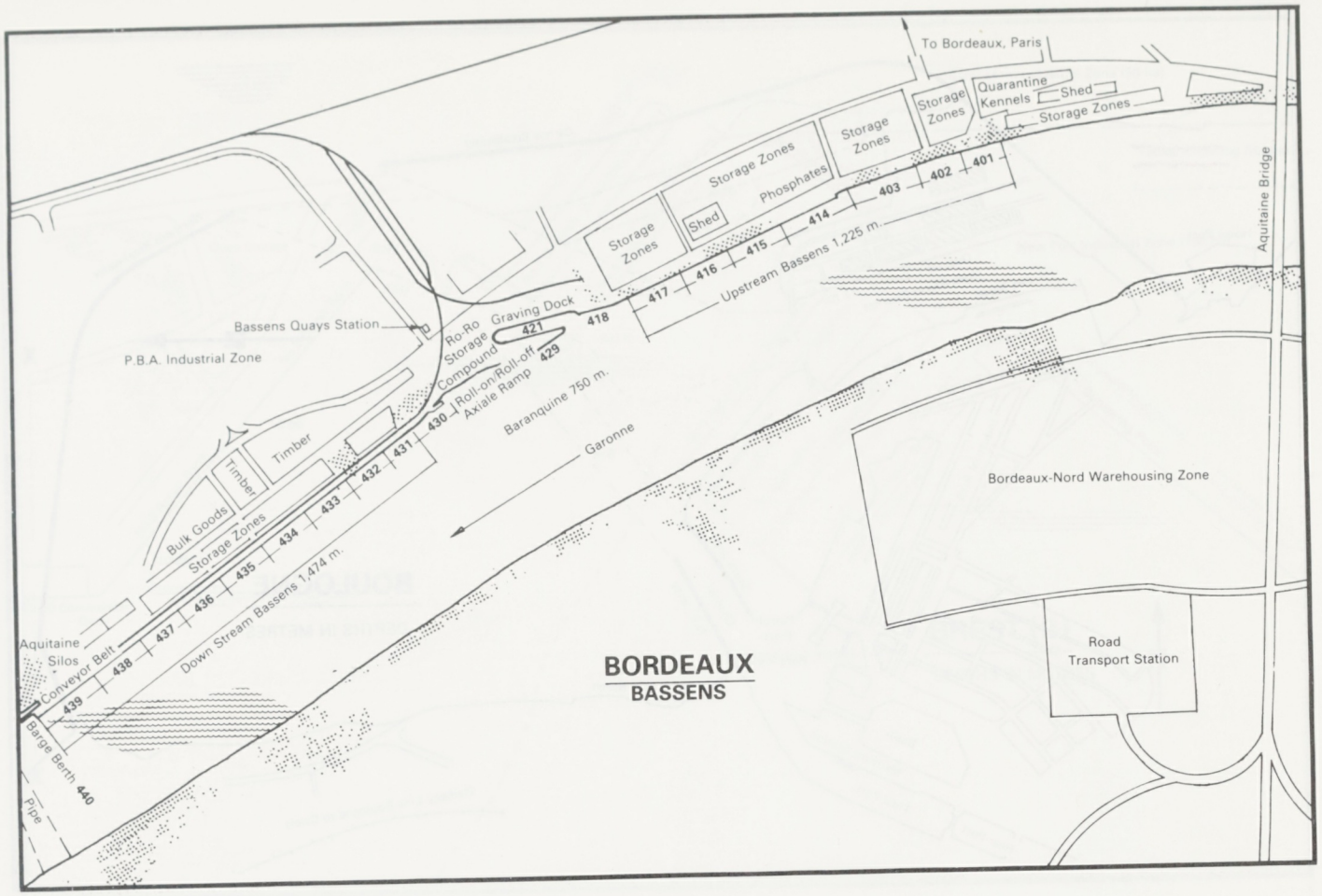

Grain silo
Carnot
M. Forques
J. Letellier
NAVIGATION CHANNEL
Socadour
European Berth
Pleasure boat harbour
Gasometers
Port office
100 0 200 metres
Shell Berth
Waiting Berth
E. Castel
A. Gommes
BAYONNE
Quai de Lesseps
Quai Pierre Leroy
NAVIGATION CHANNEL
Quai Edmond Foy
100 0 200 metres

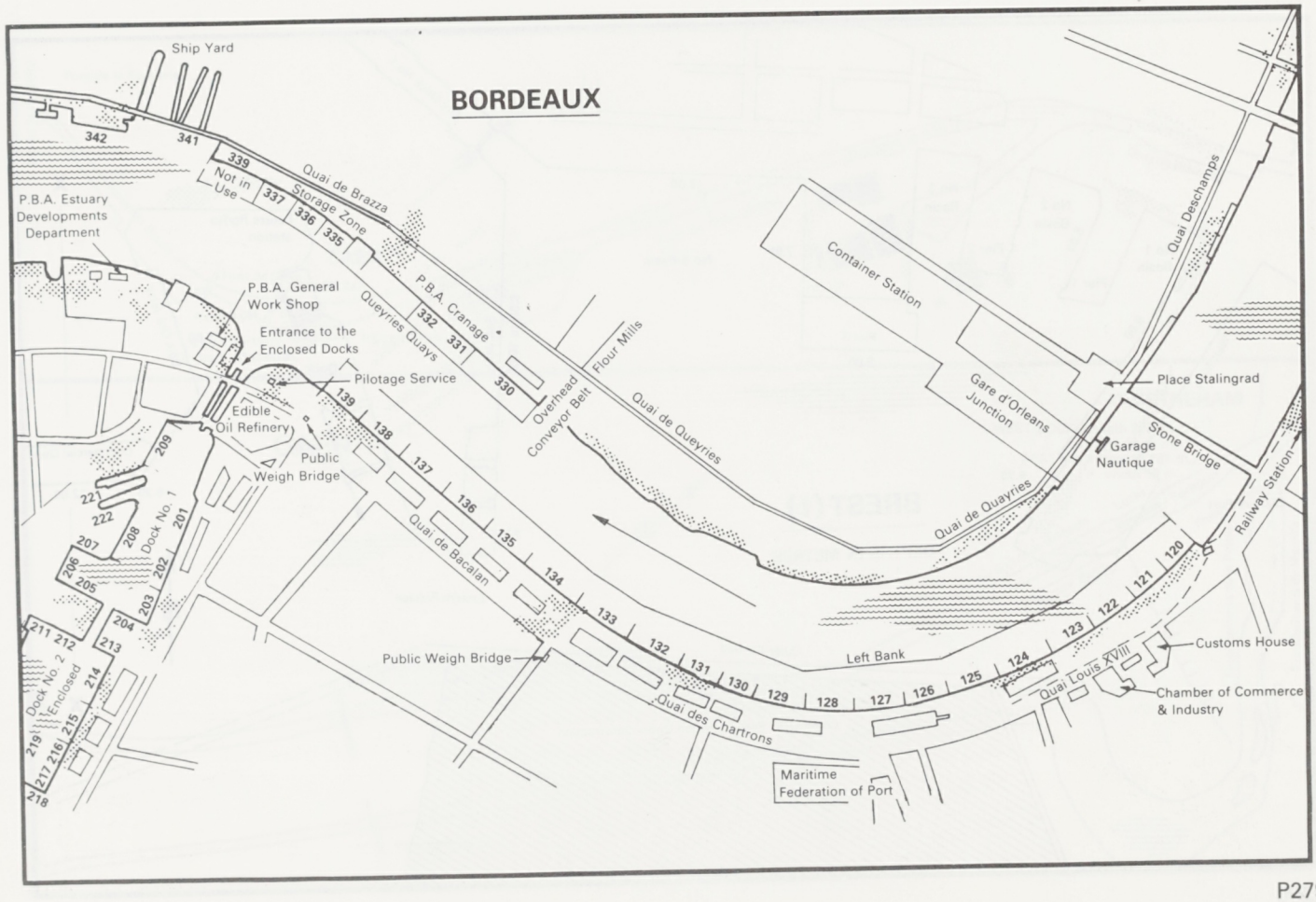

BORDEAUX
PAUILLAC – St. ESTEPHE
Pipe Line
Zone to be developed
N
Shell Refinery
710
Shell Berth
711
Traffic Operations Office
Public Berth
700
IND Zone
Slip
Gaet Port
Ferry Berth
Yacht Harbour
PAUILLAC
BANC DE St ESTEPHE
La Gironde
Pauillac — St Estephe

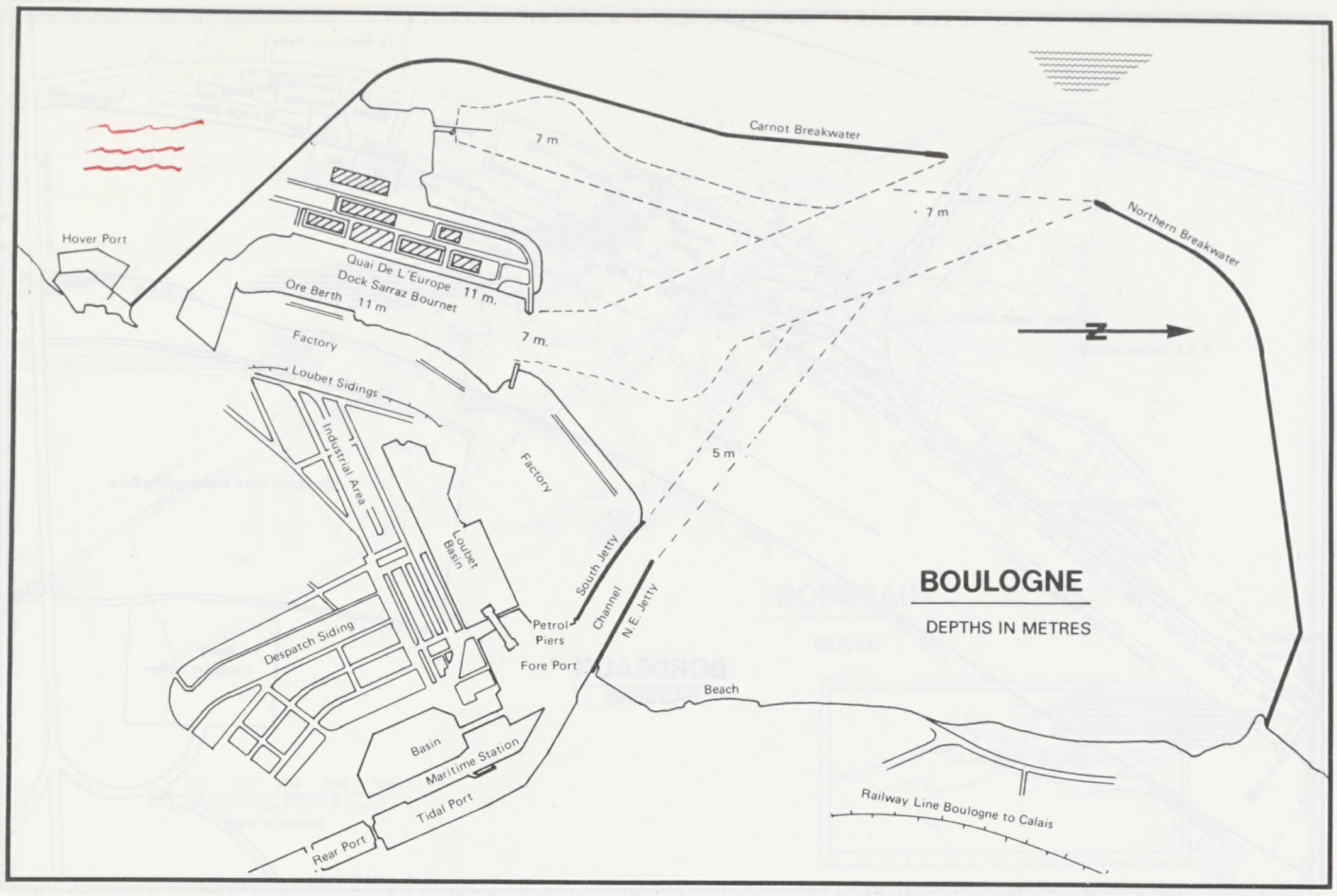

ATLANTIC OCEAN
BAC
GIRONDE
N
Tanker Berths
802
803
801
Oil Depot
LE VERDON
Ro/Ro Berth
Shed
Oil Depot
Light Industry
Container-Ro/Ro Terminal
805
Storage Area
806
Industrial Zone
BORDEAUX
VERDON
0 500 1000 2000 metres
SCALE
? OR 3000 m.

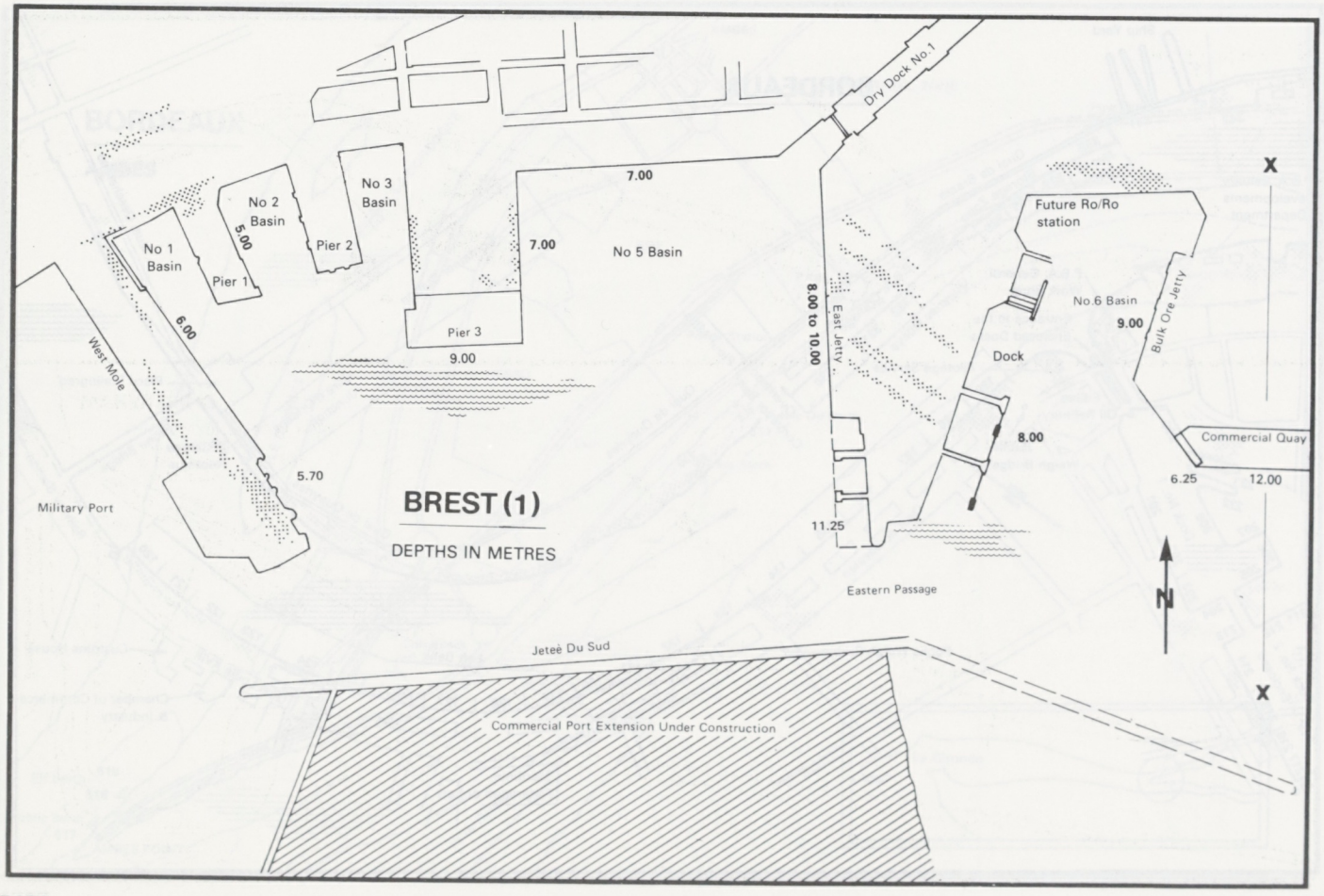

Gironde
Semabla Pier
600
601
Public Quays
602
Semabla Shed
S.C.R.E.G.
Semabla Silo
Simagir
Total
Citadelle
BLAYE
N
0 100 200 300 400 500
Scale in metres
BORDEAUX
BLAYE
La Gironde
Blaye

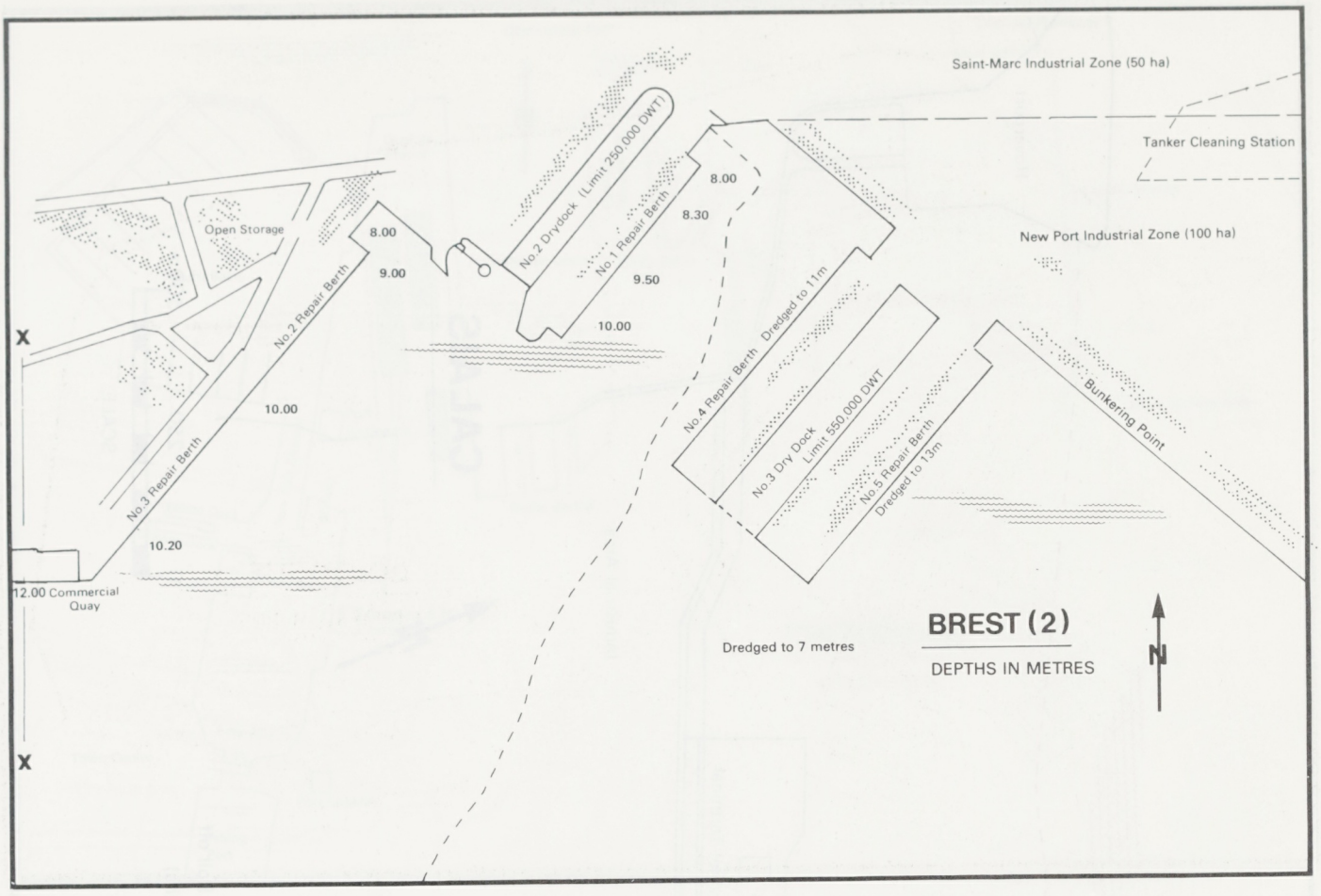

BORDEAUX
AMBES
AMBES
INDUSTRIAL ZONE
Pipe Line
LA DORDOGNE
EDF
PAB
La Garonne
Power Station
ESSO
ILE D' AMBES
Esso
Public Oil Berth
511
Esso Berth
512
N
Cofrablack
ELF
COBOGAL
Elf berth 519
518
Public Berth
517
AMBES POINT
Ile de Cazeau
La Gironde
Ambes

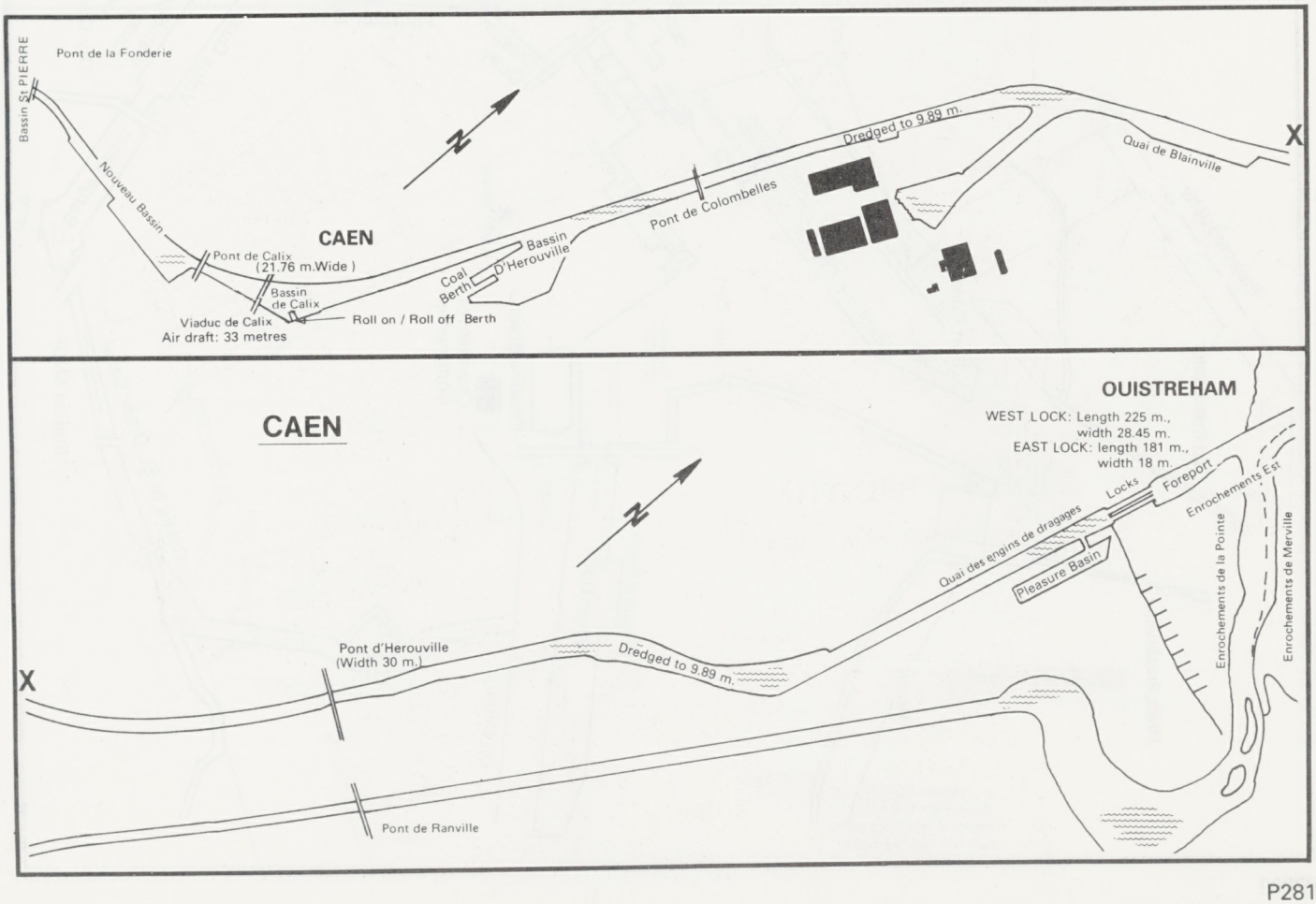

To Bordeaux, Paris
Storage Zones
Quarantine Kennels
Shed
Storage Zones
Storage Zones
Storage Zones
Phosphates
Shed
Storage Zones
401
402
403
414
415
416
417
Upstream Bassens 1,225 m.
Aquitaine Bridge
Bassens Quays Station
P.B.A. Industrial Zone
Ro-Ro Storage Compound
421
Graving Dock
418
Roll-on/Roll-off Axiale Ramp
429
Baranquine 750 m.
Garonne
Timber
Timber
Bulk Goods
Storage Zones
430
431
432
433
434
435
436
437
438
439
440
Down Stream Bassens 1,474 m.
Aquitaine Silos
Conveyor Belt
Barge Berth
Pipe
Bordeaux-Nord Warehousing Zone
Road Transport Station
BORDEAUX
BASSENS

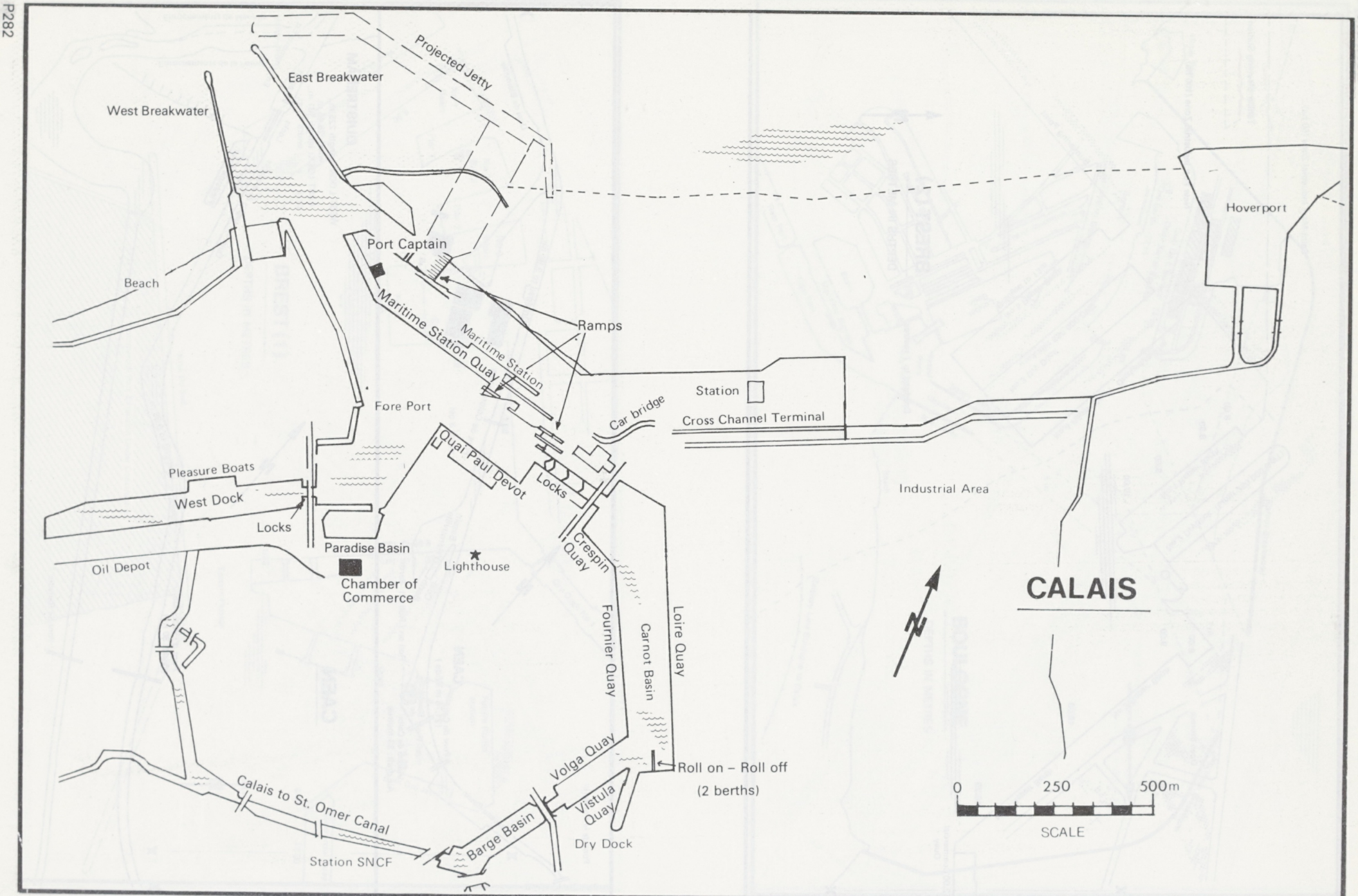

BORDEAUX
Ship Yard
342
341
339
Not in Use
337
336
335
Quai de Brazza
Storage Zone
P.B.A. Estuary Developments Department
P.B.A. General Work Shop
Entrance to the Enclosed Docks
Pilotage Service
Edible Oil Refinery
Public Weigh Bridge
Queyries Quays
332
331
330
P.B.A. Cranage
Flour Mills
Overhead Conveyor Belt
Quai de Queyries
Container Station
Gare d'Orleans Junction
Quai Deschamps
Place Stalingrad
Garage Nautique
Stone Bridge
Railway Station
Quai de Quayries
139
138
137
136
135
134
133
132
131
130
129
128
127
126
125
124
123
122
121
120
Quai de Bacalan
Public Weigh Bridge
Left Bank
Quai Louis XVIII
Customs House
Chamber of Commerce & Industry
Quai des Chartrons
Maritime Federation of Port
Dock No. 1
209
22
222
208
207
206
205
201
202
203
204
213
Dock No. 2 Enclosed
211
212
214
215
216
217
218
219

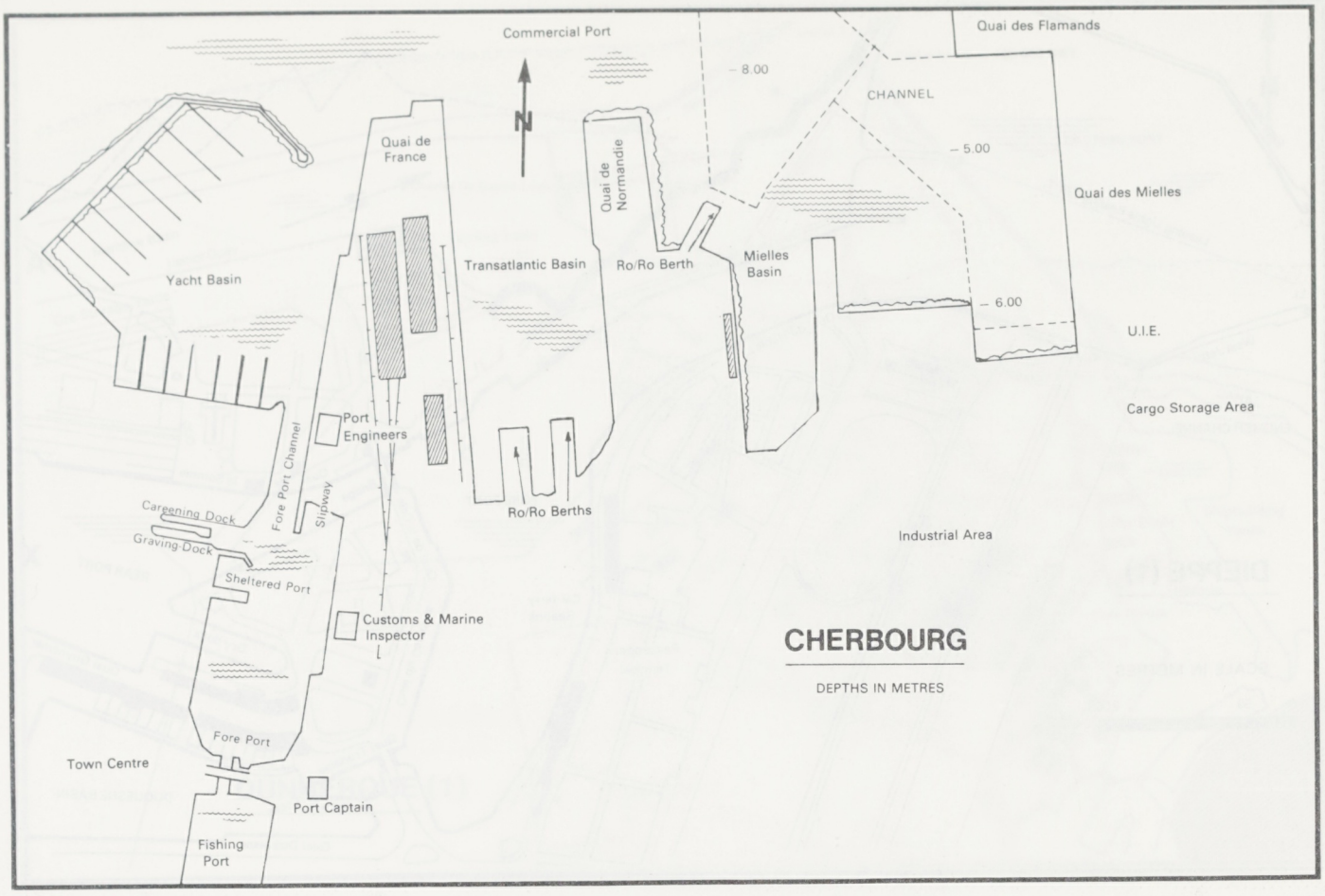

Carnot Breakwater
7 m
7 m
Northern Breakwater
Hover Port
Quai De L'Europe 11 m.
Dock Sarraz Bournet
Ore Berth 11 m
7 m.
Factory
Loubet Sidings
Industrial Area
Factory
5 m
Loubet Basin
South Jetty
Channel
N.E. Jetty
Petrol Piers
Fore Port
Despatch Siding
Beach
Basin
Maritime Station
Tidal Port
Rear Port
Railway Line Boulogne to Calais
N
BOULOGNE
DEPTHS IN METRES

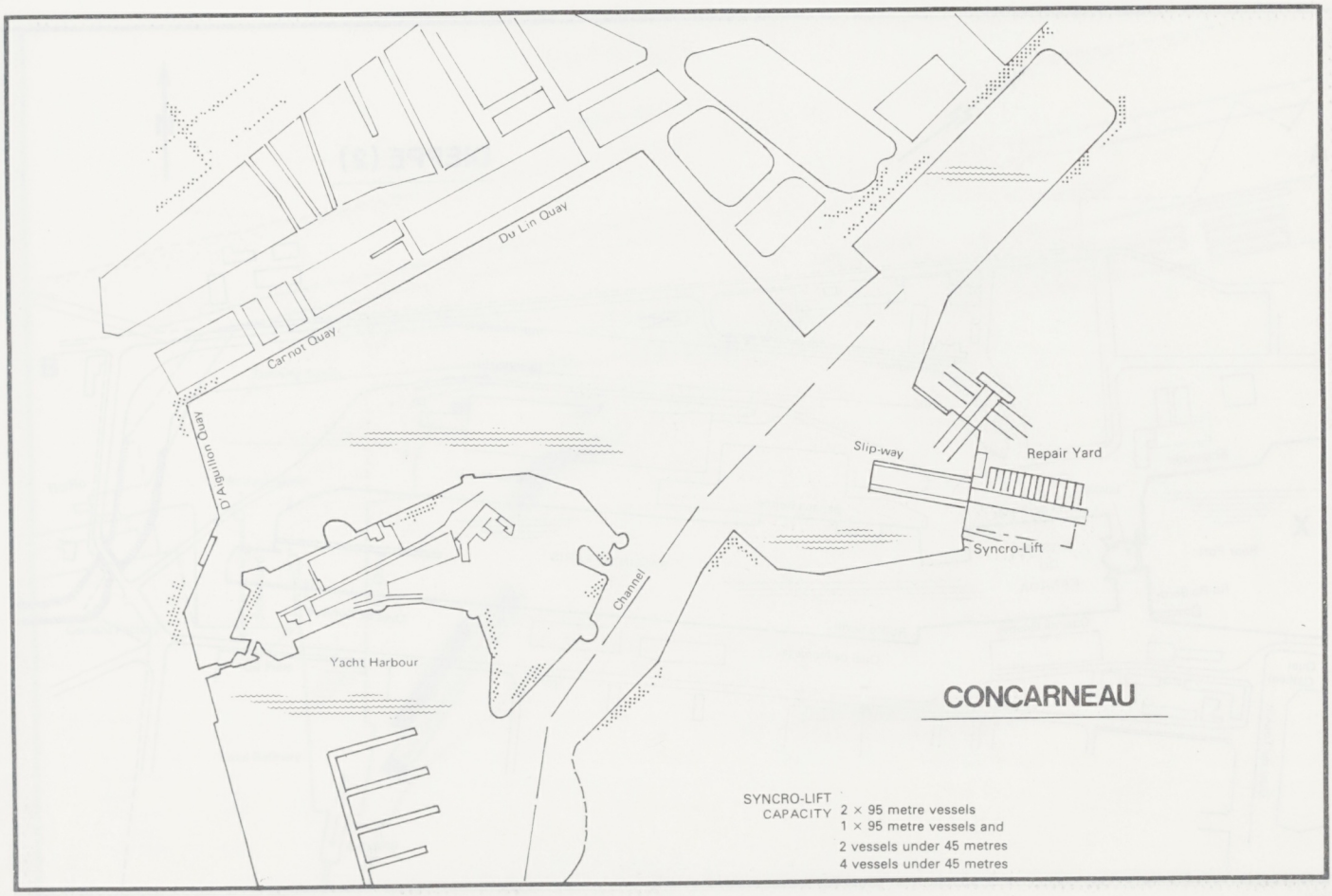

Dry Dock No.1
7.00
No 3 Basin
No 2 Basin
No 1 Basin
5.00
Pier 2
Pier 1
7.00
No 5 Basin
6.00
West Mole
Pier 3
9.00
5.70
Military Port
BREST (1)
DEPTHS IN METRES
8.00 to 10.00
East Jetty
Future Ro/Ro station
No.6 Basin
9.00
Bulk Ore Jetty
Dock
8.00
Commercial Quay
6.25
12.00
11.25
Eastern Passage
X
X
N
Jetee Du Sud
Commercial Port Extension Under Construction

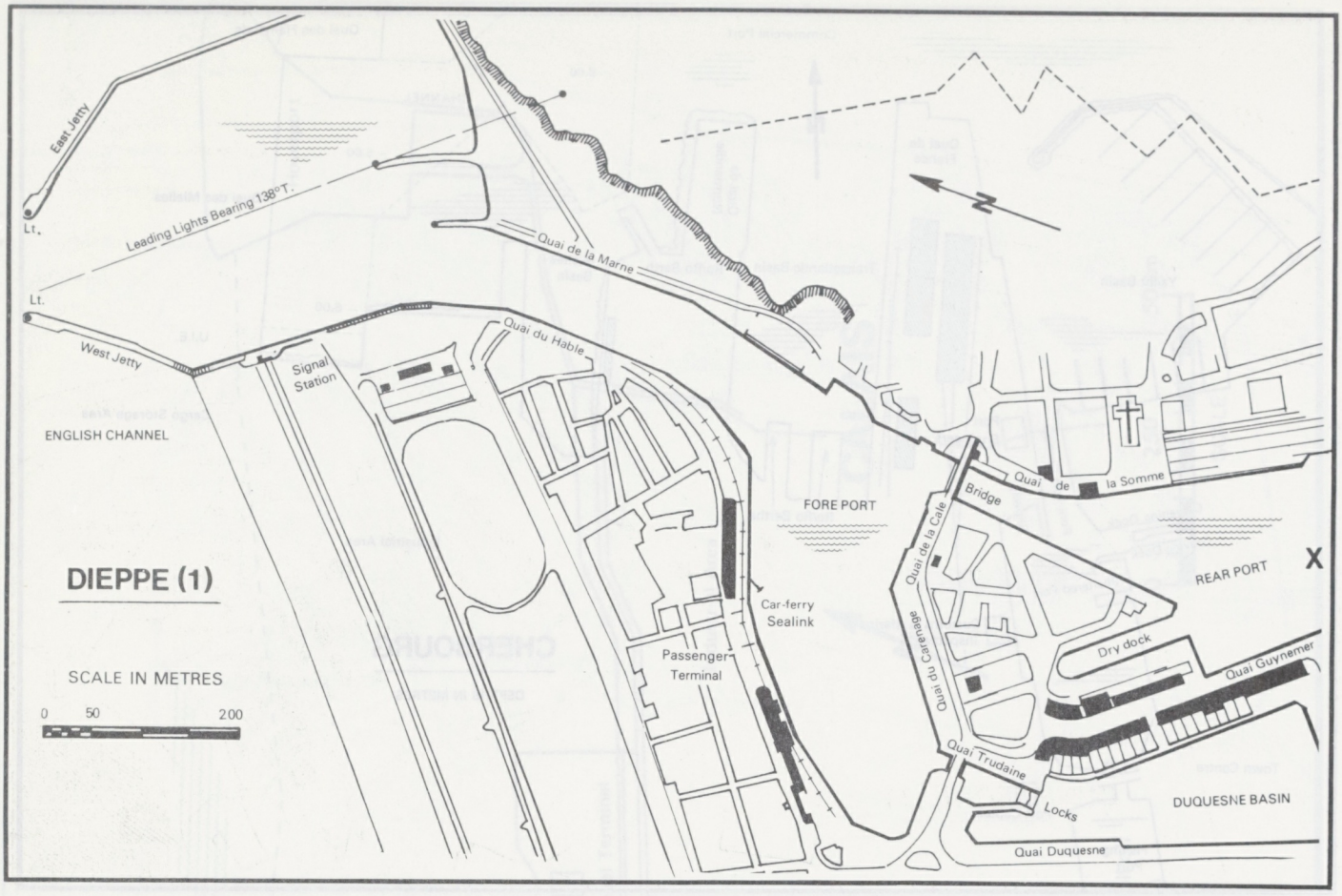

Saint-Marc Industrial Zone (50 ha)
Tanker Cleaning Station
New Port Industrial Zone (100 ha)
Open Storage
No.2 Drydock (Limit 250,000 DWT)
No.1 Repair Berth
No.2 Repair Berth
No.3 Repair Berth
No.4 Repair Berth Dredged to 11m
No.3 Dry Dock Limit 550,000 DWT
No.5 Repair Berth Dredged to 13m
Bunkering Point
8.00
9.00
8.30
9.50
10.00
10.20
12.00 Commercial Quay
Dredged to 7 metres
X
X
BREST (2)
DEPTHS IN METRES
N

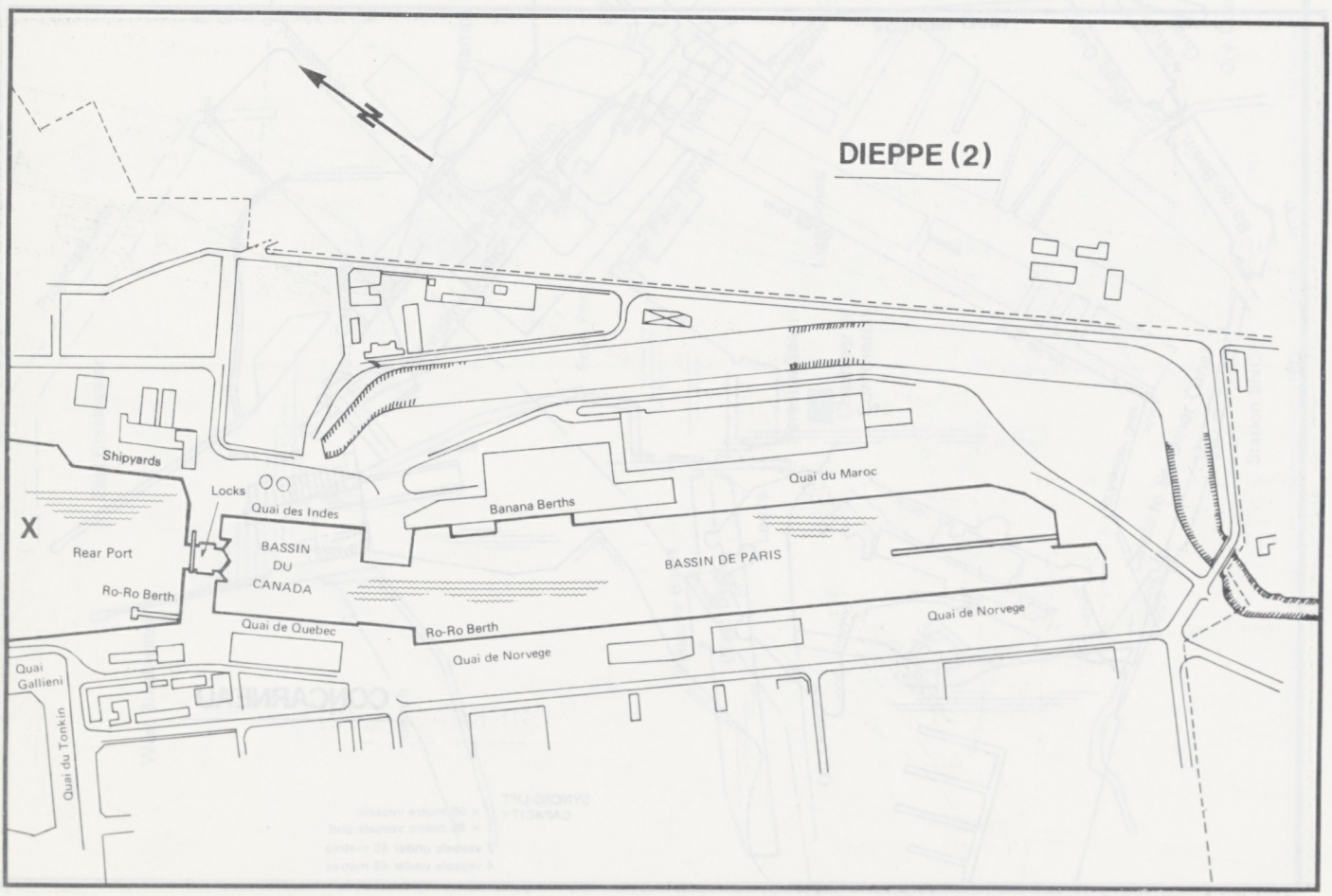

Pont de la Fonderie
Bassin St PIERRE
Nouveau Bassin
Pont de Calix
(21.76 m.Wide)
Bassin de Calix
Viaduc de Calix
Air draft: 33 metres
CAEN
Coal Berth
Bassin D'Herouville
Roll on / Roll off Berth
Pont de Colombelles
Dredged to 9.89 m.
Quai de Blainville
X
N
CAEN
OUISTREHAM
WEST LOCK: Length 225 m., width 28.45 m.
EAST LOCK: length 181 m., width 18 m.
Locks
Foreport
Enrochements Est
Quai des engins de dragages
Pleasure Basin
Enrochements de la Pointe
Enrochements de Merville
Pont d'Herouville
(Width 30 m.)
Dredged to 9.89 m.
Pont de Ranville
X
N

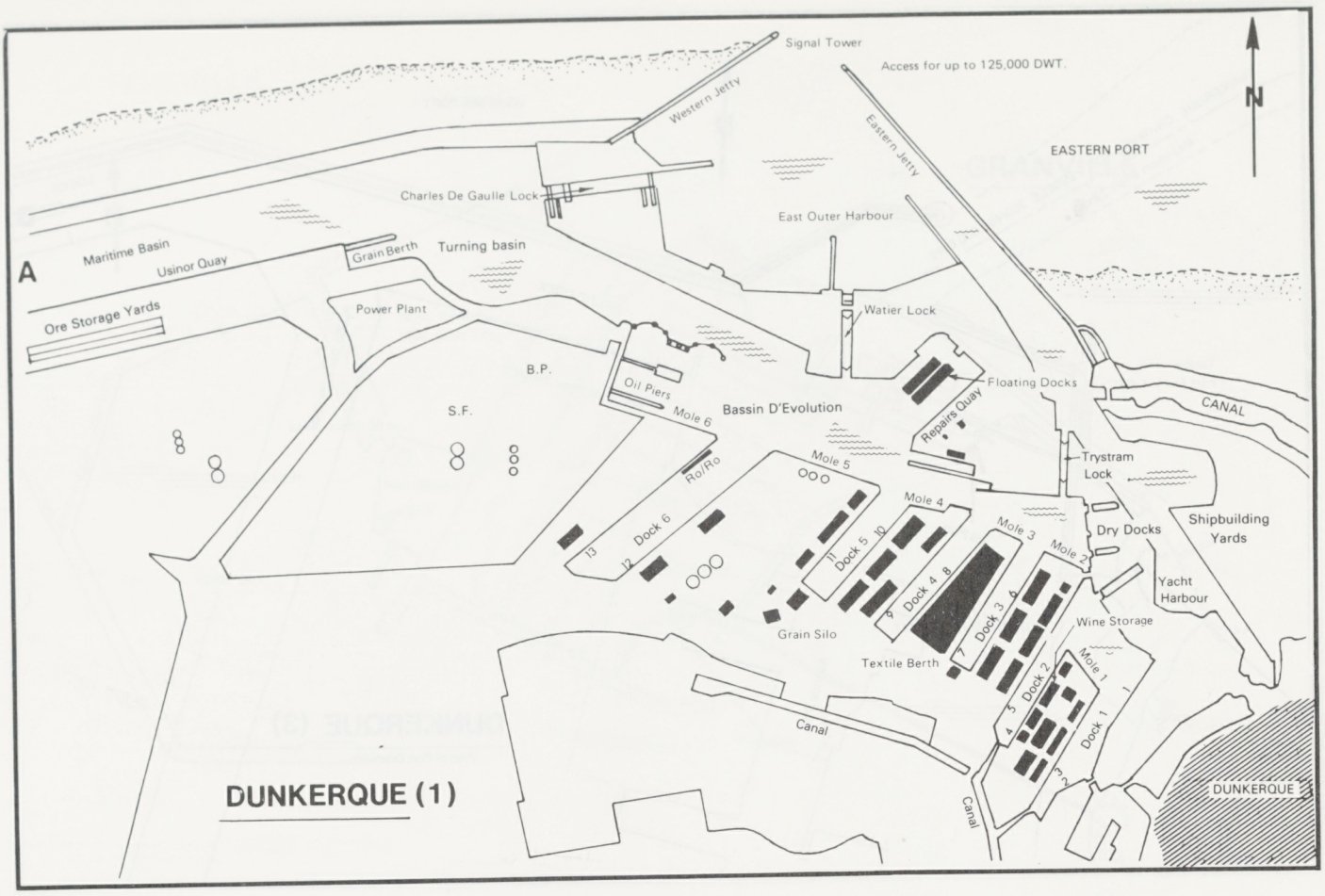

Projected Jetty
East Breakwater
West Breakwater
Hoverport
Port Captain
Beach
Maritime Station Quay
Maritime Station
Ramps
Station
Car bridge
Cross Channel Terminal
Fore Port
Quai Paul Devot
Locks
Pleasure Boats
West Dock
Locks
Industrial Area
Paradise Basin
Lighthouse
Crespin Quay
Oil Depot
Chamber of Commerce
CALAIS
Fournier Quay
Carnot Basin
Loire Quay
Volga Quay
Roll on – Roll off
(2 berths)
Calais to St. Omer Canal
Vistula Quay
Barge Basin
Dry Dock
Station SNCF
0
250
500m
SCALE

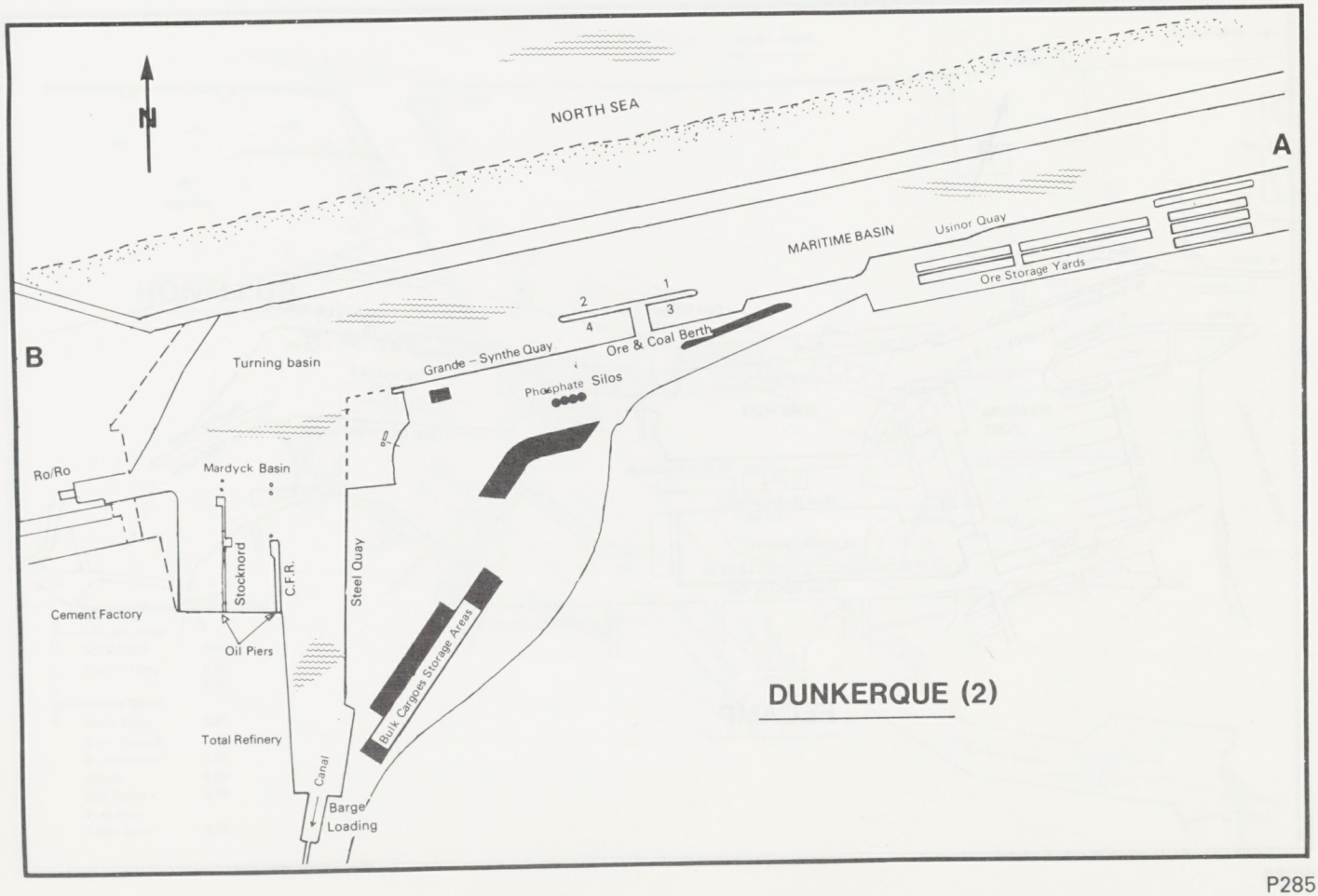

Commercial Port
Quai des Flamands
– 8.00
CHANNEL
– 5.00
Quai de France
Quai de Normandie
Quai des Mielles
Yacht Basin
Transatlantic Basin
Ro/Ro Berth
Mielles Basin
– 6.00
U.I.E.
Cargo Storage Area
Port Engineers
Fore Port Channel
Slipway
Careening Dock
Graving Dock
Ro/Ro Berths
Industrial Area
Sheltered Port
Customs & Marine Inspector
CHERBOURG
DEPTHS IN METRES
Fore Port
Town Centre
Port Captain
Fishing Port

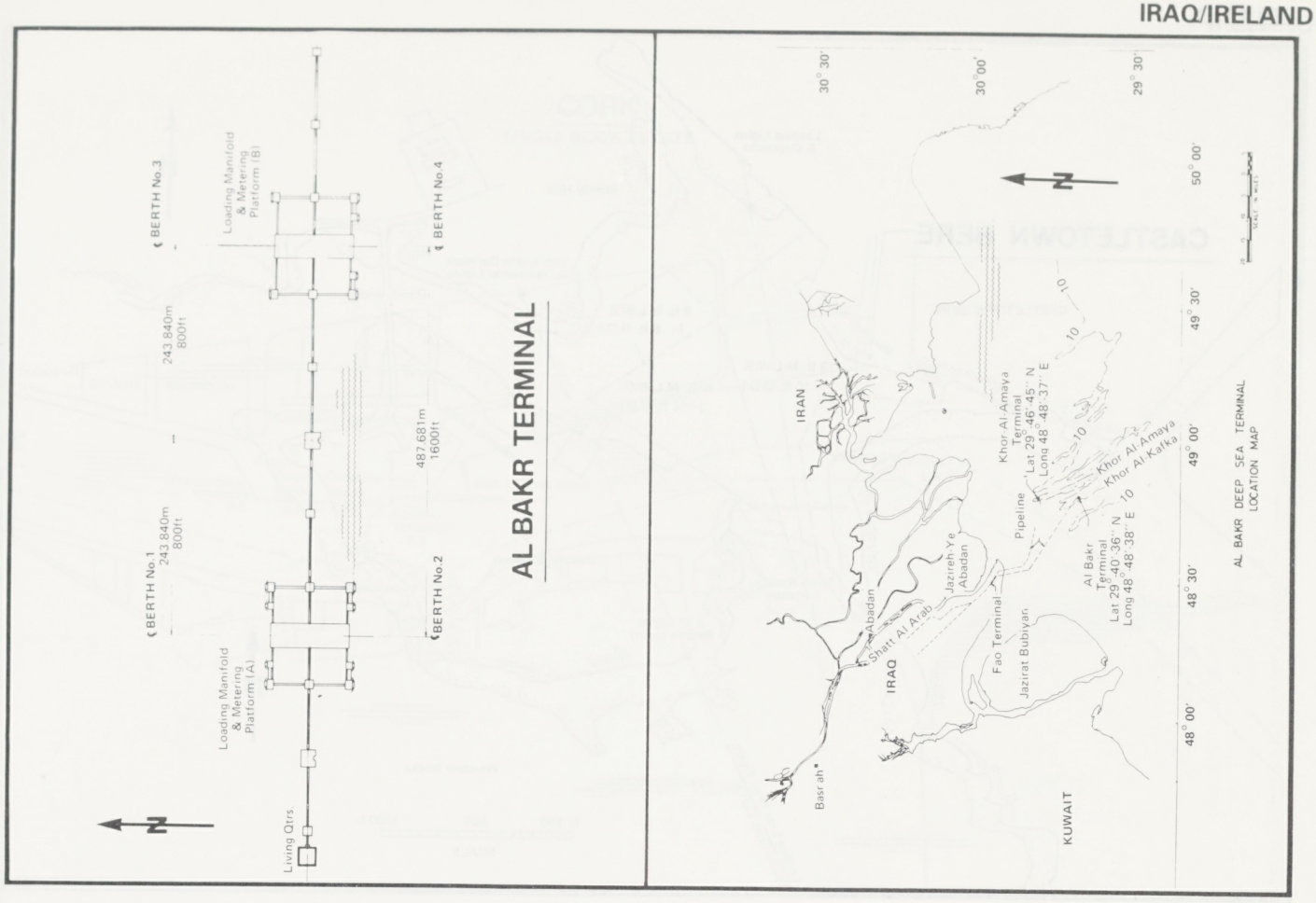

Du Lin Quay
Carnot Quay
D'Aiguillon Quay
Slip-way
Repair Yard
Syncro-Lift
Channel
Yacht Harbour
CONCARNEAU
SYNCRO-LIFT CAPACITY
2 × 95 metre vessels
1 × 95 metre vessels and
2 vessels under 45 metres
4 vessels under 45 metres

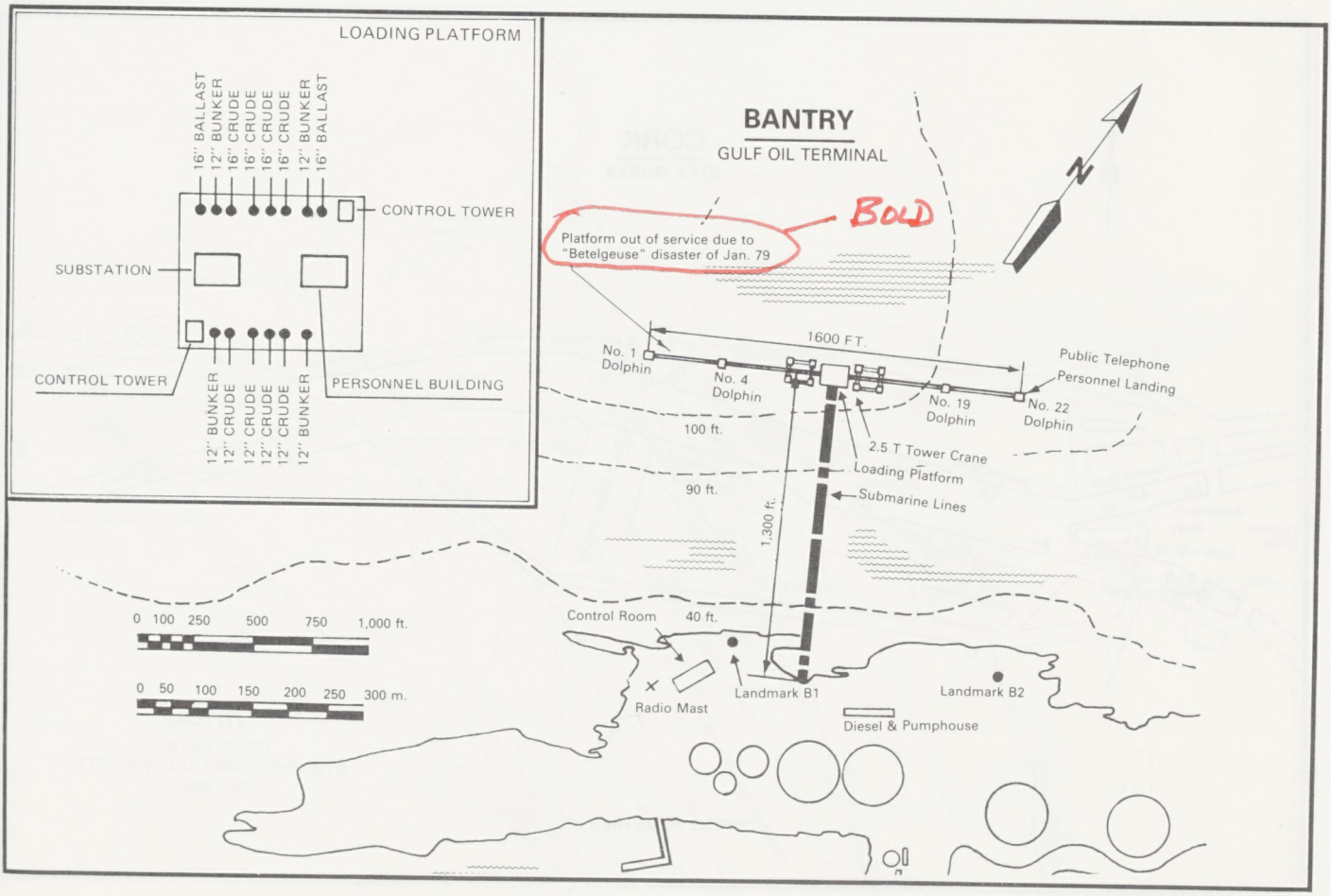

East Jetty
Lt.
Leading Lights Bearing 138°T.
Lt.
Quai de la Marne
West Jetty
Signal Station
Quai du Hable
ENGLISH CHANNEL
DIEPPE (1)
SCALE IN METRES
0 50 200
FORE PORT
Car-ferry Sealink
Passenger Terminal
Quai de la Cale
Quai du Carenage
Bridge
Quai de la Somme
REAR PORT
X
Dry dock
Quai Guynemer
Quai Trudaine
Locks
DUQUESNE BASIN
Quai Duquesne

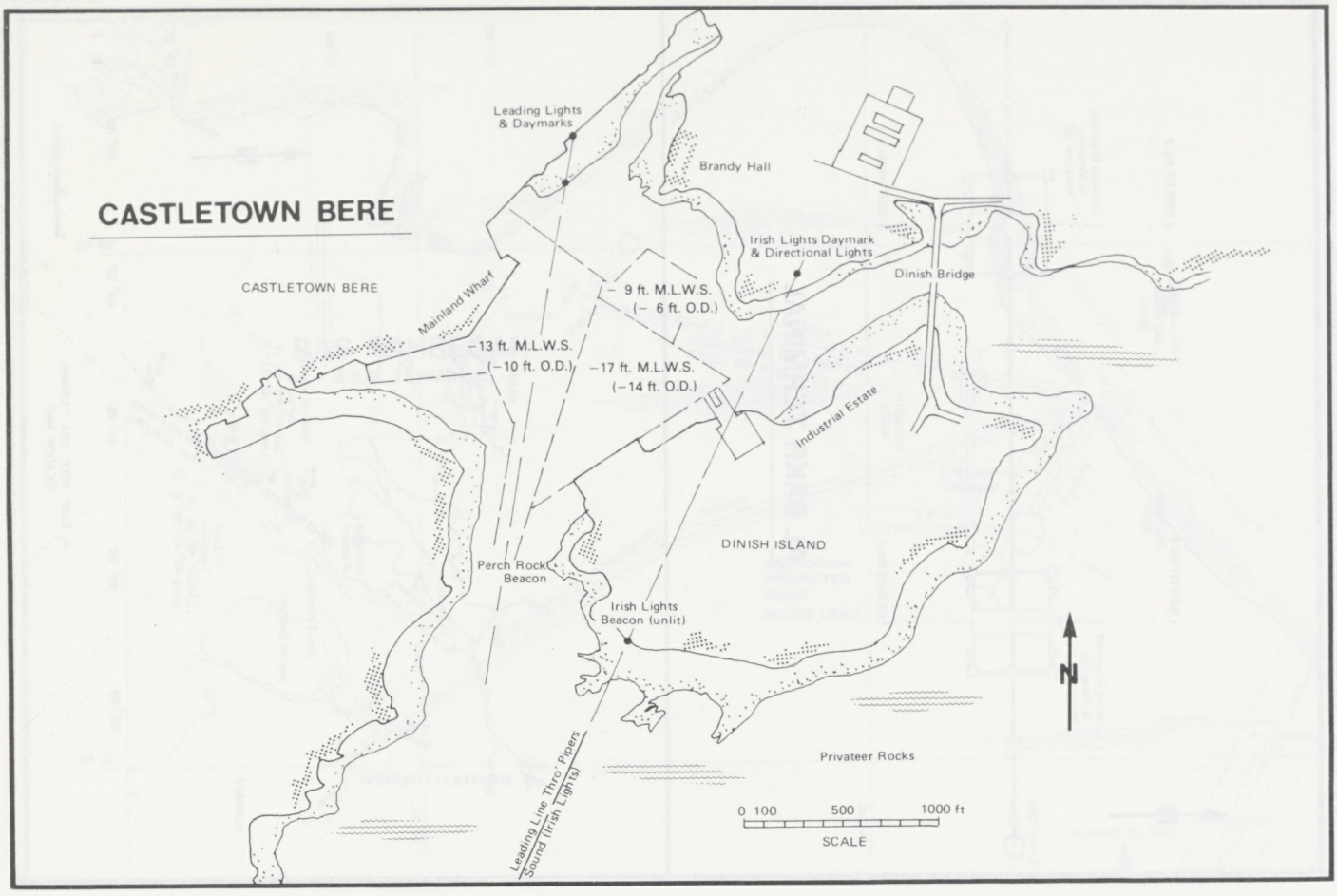

DIEPPE (2)
Shipyards
Locks
Quai des Indes
X
Rear Port
Ro-Ro Berth
BASSIN DU CANADA
Quai de Quebec
Banana Berths
Quai du Maroc
BASSIN DE PARIS
Ro-Ro Berth
Quai de Norvege
Quai de Norvege
Quai Gallieni
Quai du Tonkin

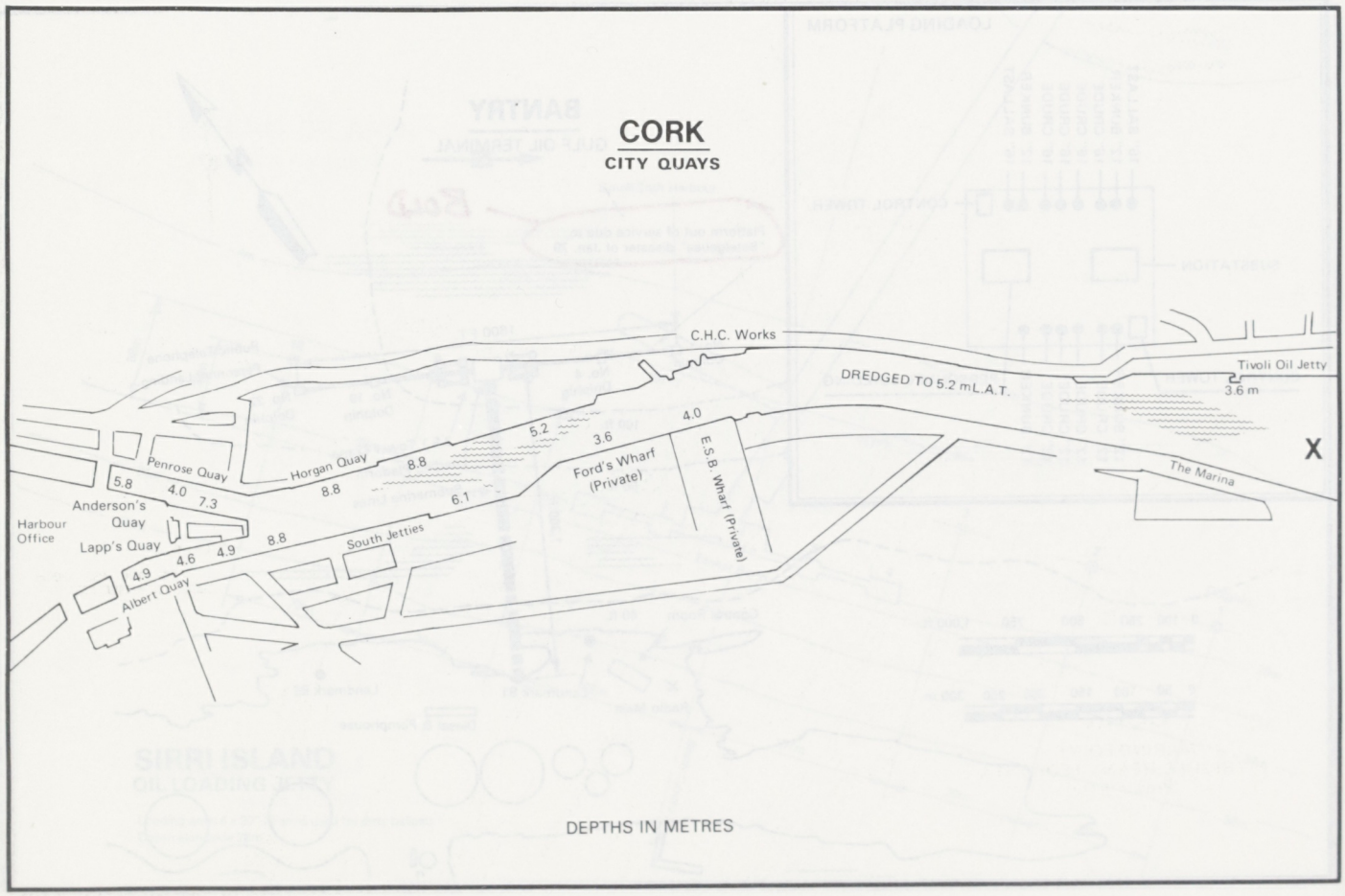

Signal Tower
Access for up to 125,000 DWT.
N
Western Jetty
Eastern Jetty
EASTERN PORT
Charles De Gaulle Lock
East Outer Harbour
A
Maritime Basin
Usinor Quay
Grain Berth
Turning basin
Ore Storage Yards
Power Plant
Watier Lock
B.P.
Oil Piers
Mole 6
Bassin D'Evolution
Floating Docks
S.F.
Repairs Quay
CANAL
Trystram Lock
Mole 5
Ro/Ro
Mole 4
Mole 3
Mole 2
Dry Docks
Shipbuilding Yards
Dock 6
13
12
Dock 5
11
10
Dock 4
9
8
Yacht Harbour
Grain Silo
Wine Storage
Textile Berth
7
Dock 3
6
Mole 1
Dock 2
5
1
4
Dock 1
Canal
DUNKERQUE
Canal
DUNKERQUE (1)

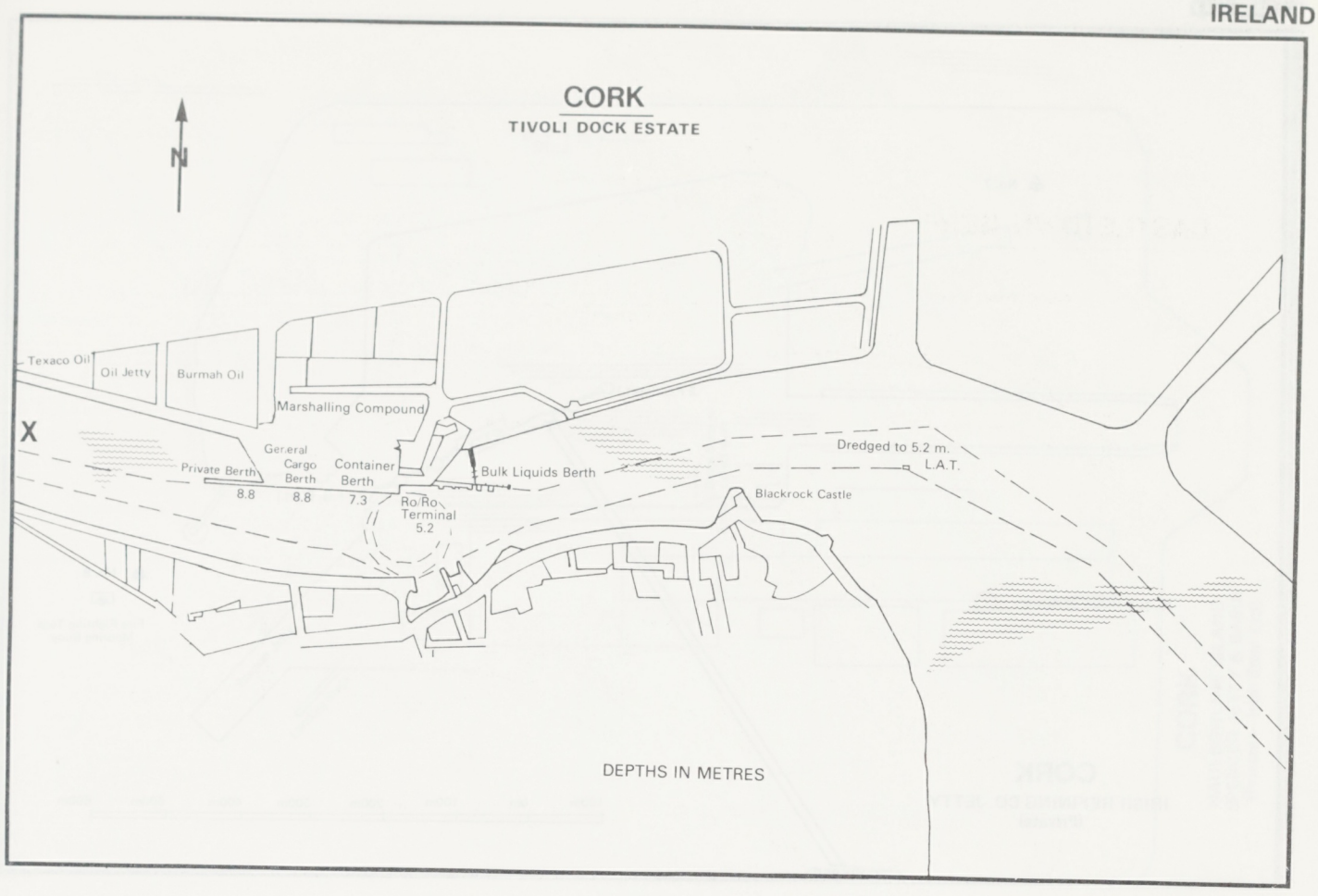

N
NORTH SEA
A
MARITIME BASIN
Usinor Quay
Ore Storage Yards
2
1
4
3
B
Turning basin
Grande – Synthe Quay
Ore & Coal Berth
Phosphate Silos
Ro/Ro
Mardyck Basin
Steel Quay
Stocknord
C.F.R.
Cement Factory
Oil Piers
Bulk Cargoes Storage Areas
Total Refinery
Canal
Barge Loading
DUNKERQUE (2)

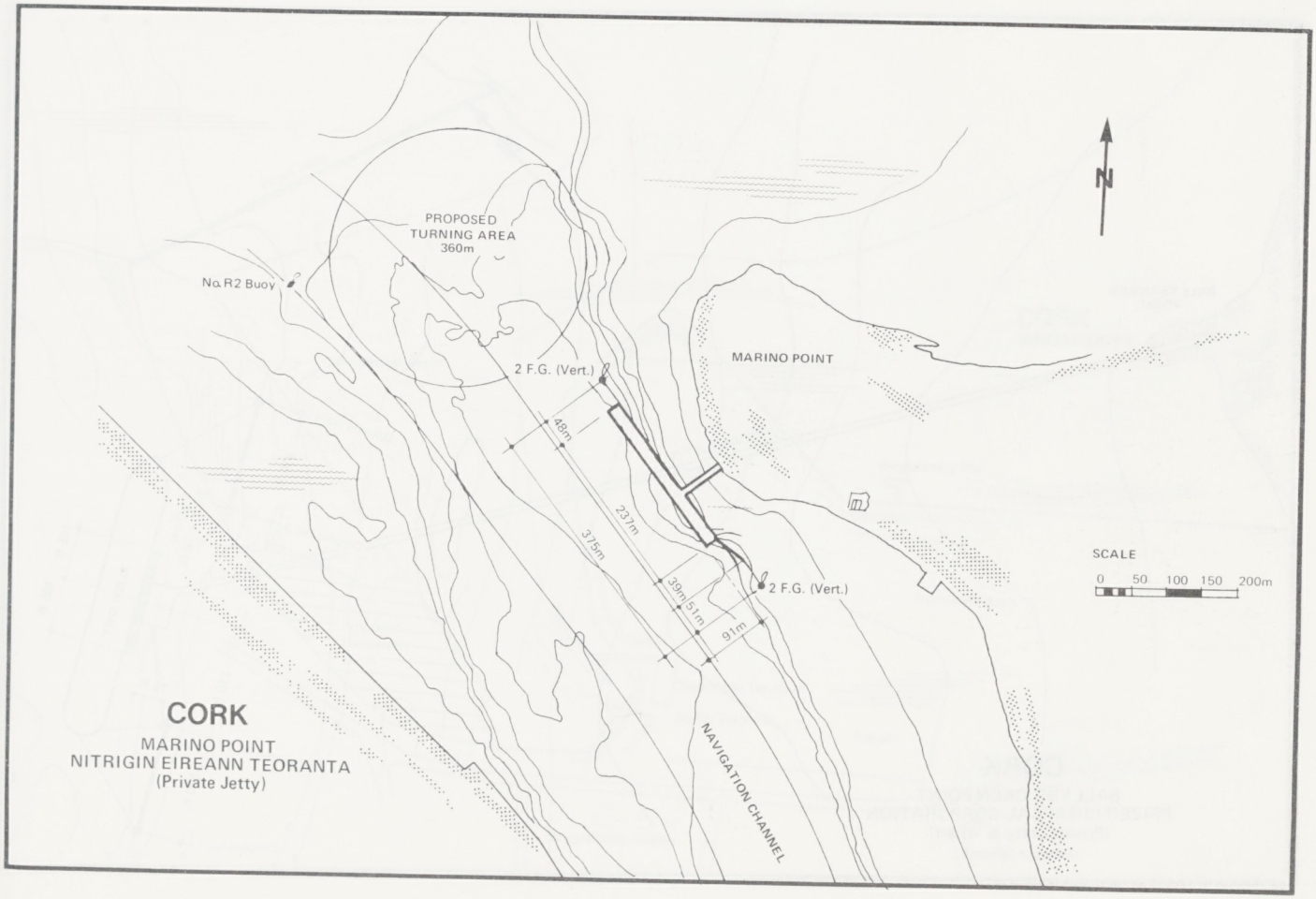

AL BAKR TERMINAL
BERTH No.1
243.840m
800ft
BERTH No.2
BERTH No.3
BERTH No.4
487.681m
1600ft
Loading Manifold & Metering Platform (A)
Loading Manifold & Metering Platform (B)
Living Qtrs
N
AL BAKR DEEP SEA TERMINAL
LOCATION MAP
IRAN
IRAQ
KUWAIT
Basrah
Abadan
Shatt Al Arab
Jazireh-Ye Abadan
Fao Terminal
Jaziret Bubiyan
Pipeline
Khor Al Amaya Terminal
Lat 29° 46' 45" N
Long 48° 48' 37" E
Khor Al Amaya
Khor Al Kafka
Al Bakr Terminal
Lat 29° 40' 36" N
Long 48° 48' 38" E
30° 30'
30° 00'
29° 30'
50° 00'
49° 30'
49° 00'
48° 30'
48° 00'

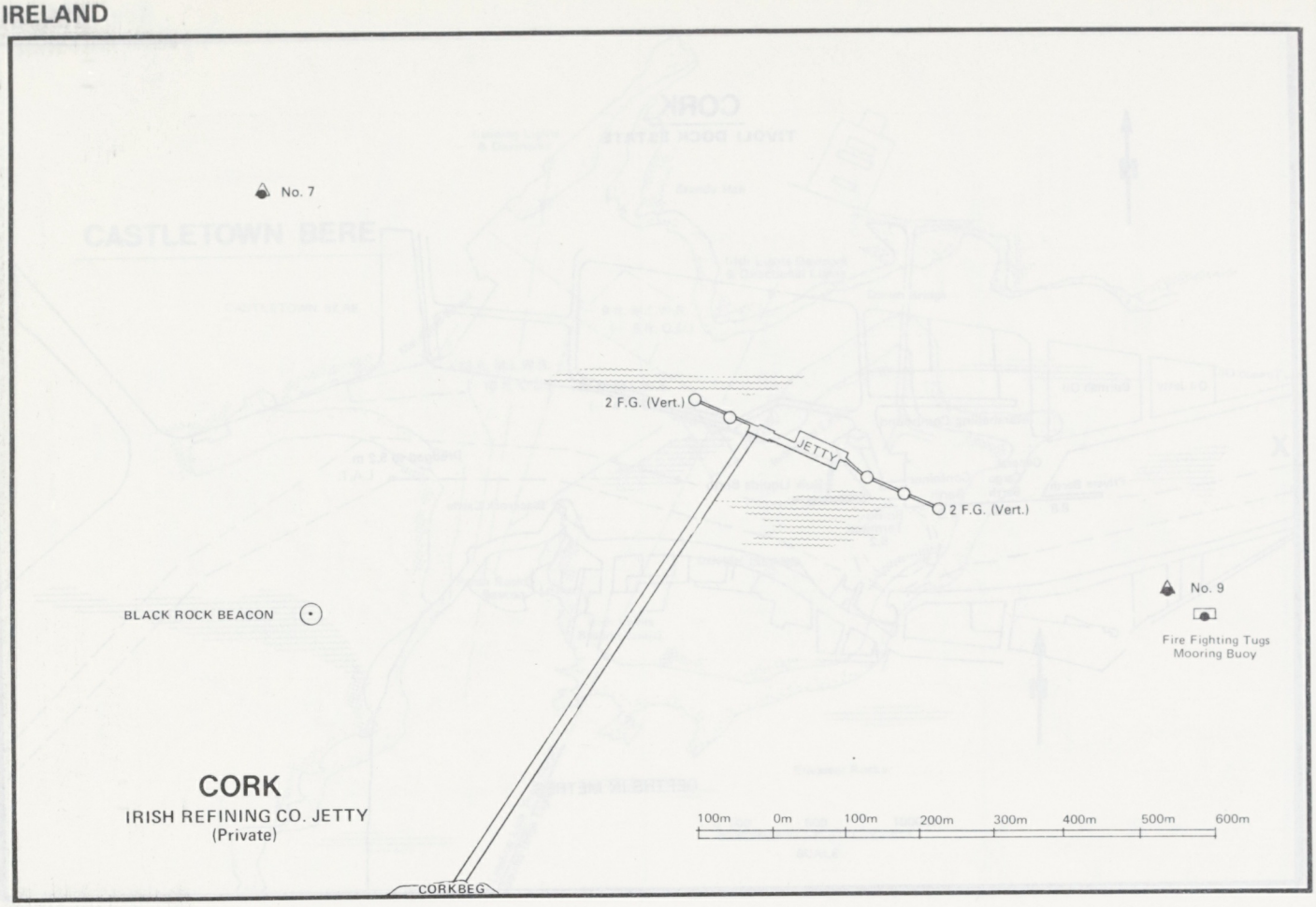

LOADING PLATFORM
16" BALLAST
12" BUNKER
16" CRUDE
CONTROL TOWER
SUBSTATION
PERSONNEL BUILDING
BANTRY
GULF OIL TERMINAL
BOLD
Platform out of service due to "Betelgeuse" disaster of Jan. 79
1600 FT.
No. 1 Dolphin
No. 4 Dolphin
No. 19 Dolphin
No. 22 Dolphin
Public Telephone
Personnel Landing
100 ft.
90 ft.
2.5 T Tower Crane
Loading Platform
Submarine Lines
1,300 ft.
Control Room
40 ft.
Radio Mast
Landmark B1
Landmark B2
Diesel & Pumphouse
0 100 250 500 750 1,000 ft.
0 50 100 150 200 250 300 m.
N


CASTLETOWN BERE
CASTLETOWN BERE
Leading Lights & Daymarks
Brandy Hall
Irish Lights Daymark & Directional Lights
Dinish Bridge
Mainland Wharf
– 9 ft. M.L.W.S. (– 6 ft. O.D.)
–13 ft. M.L.W.S. (–10 ft. O.D.)
–17 ft. M.L.W.S. (–14 ft. O.D.)
Industrial Estate
DINISH ISLAND
Perch Rock Beacon
Irish Lights Beacon (unlit)
N
Privateer Rocks
Leading Line Thro' Pipers Sound (Irish Lights)
0 100 500 1000 ft
SCALE


CORK
CITY QUAYS
C.H.C. Works
DREDGED TO 5.2 m L.A.T.
Tivoli Oil Jetty
3.6 m
X
Penrose Quay
Horgan Quay
Ford's Wharf (Private)
E.S.B. Wharf (Private)
The Marina
Anderson's Quay
Harbour Office
Lapp's Quay
South Jetties
Albert Quay
DEPTHS IN METRES

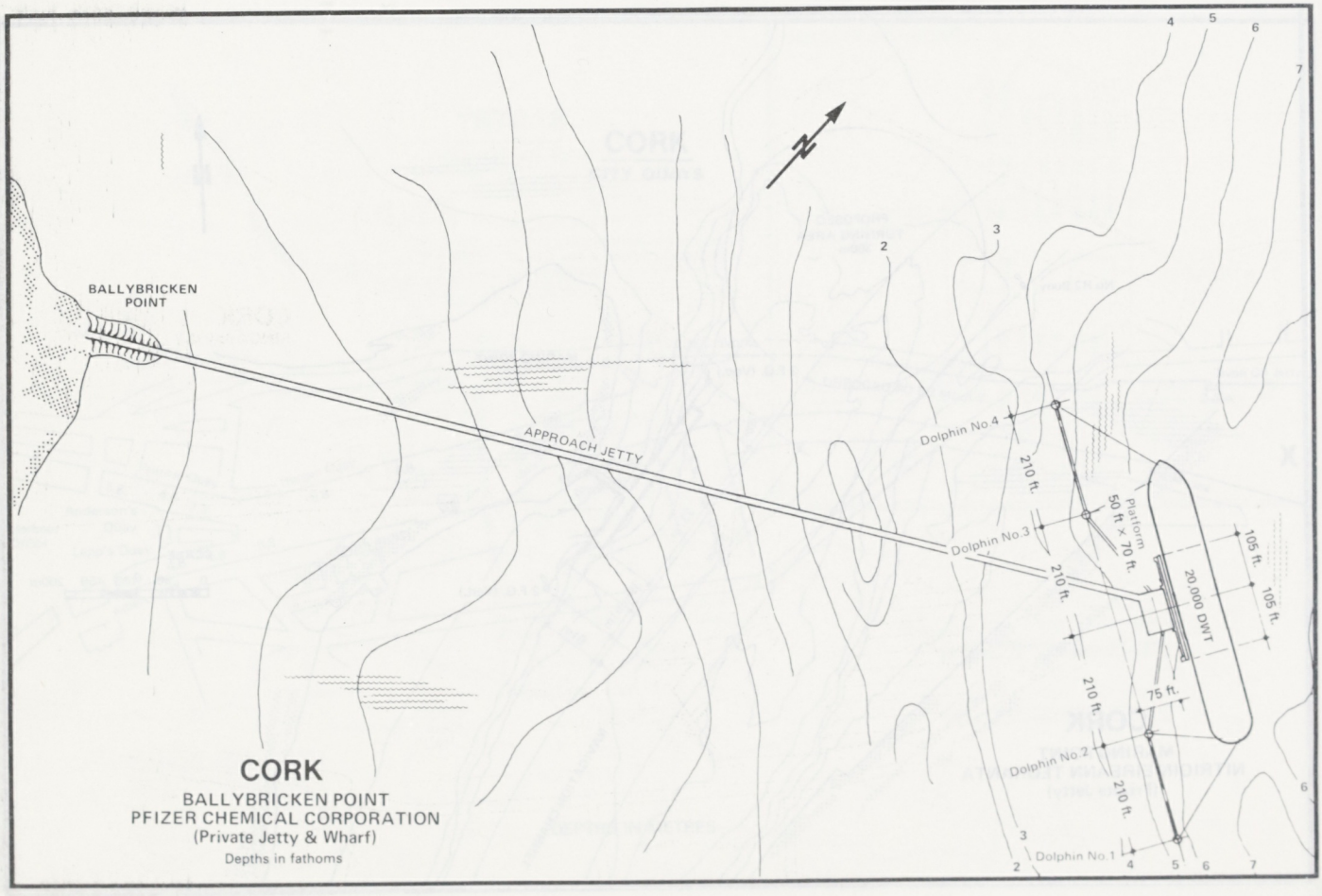

CORK
TIVOLI DOCK ESTATE
N
Texaco Oil
Oil Jetty
Burmah Oil
Marshalling Compound
X
General Cargo Berth
Container Berth
Private Berth
8.8
8.8
7.3
Ro/Ro Terminal
5.2
Bulk Liquids Berth
Dredged to 5.2 m. L.A.T.
Blackrock Castle
DEPTHS IN METRES


N
PROPOSED TURNING AREA 360m
No. R2 Buoy
2 F.G. (Vert.)
MARINO POINT
48m
237m
375m
39m
51m
91m
2 F.G. (Vert.)
SCALE
0 50 100 150 200m
NAVIGATION CHANNEL
CORK
MARINO POINT
NITRIGIN EIREANN TEORANTA
(Private Jetty)



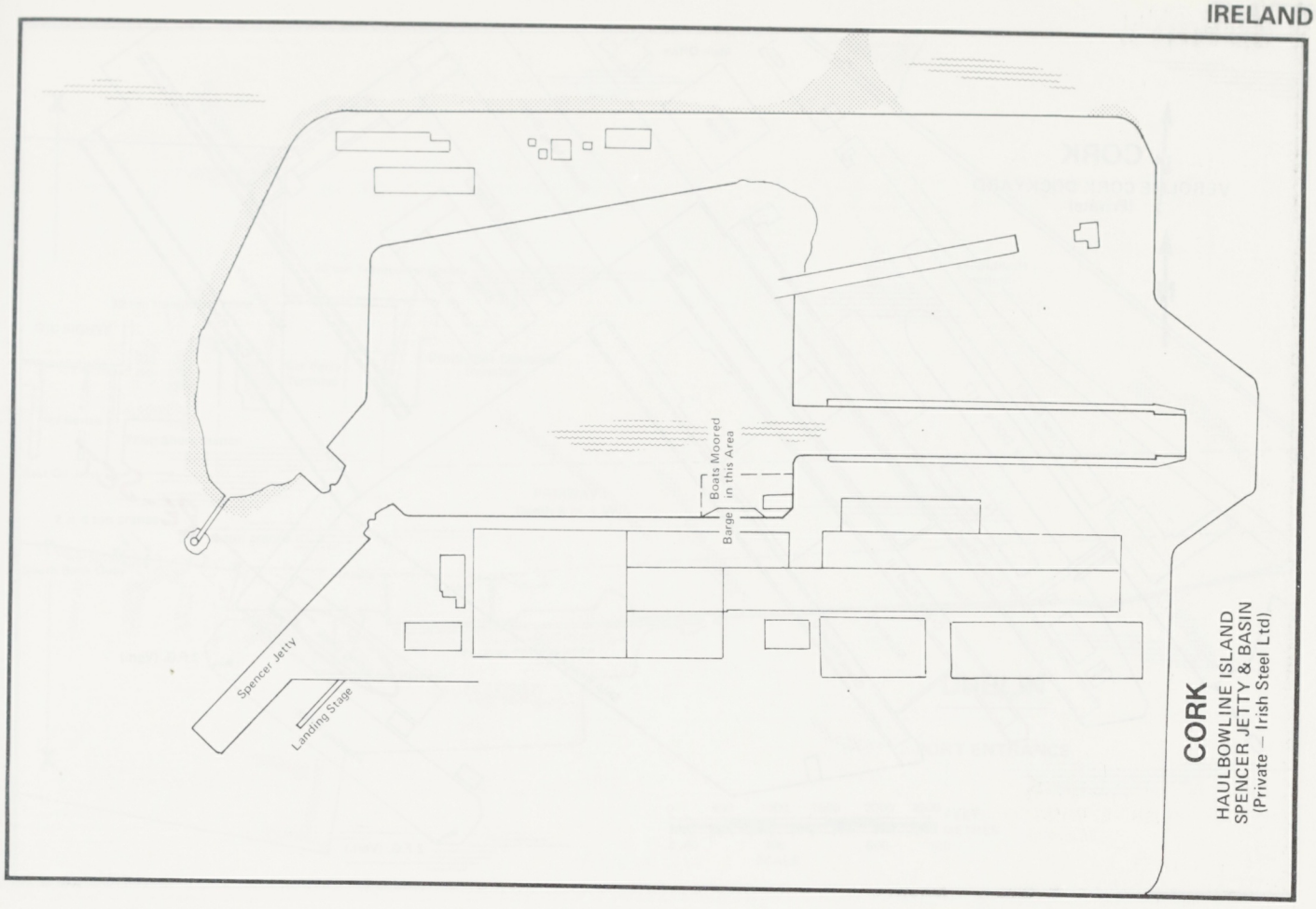
CORK

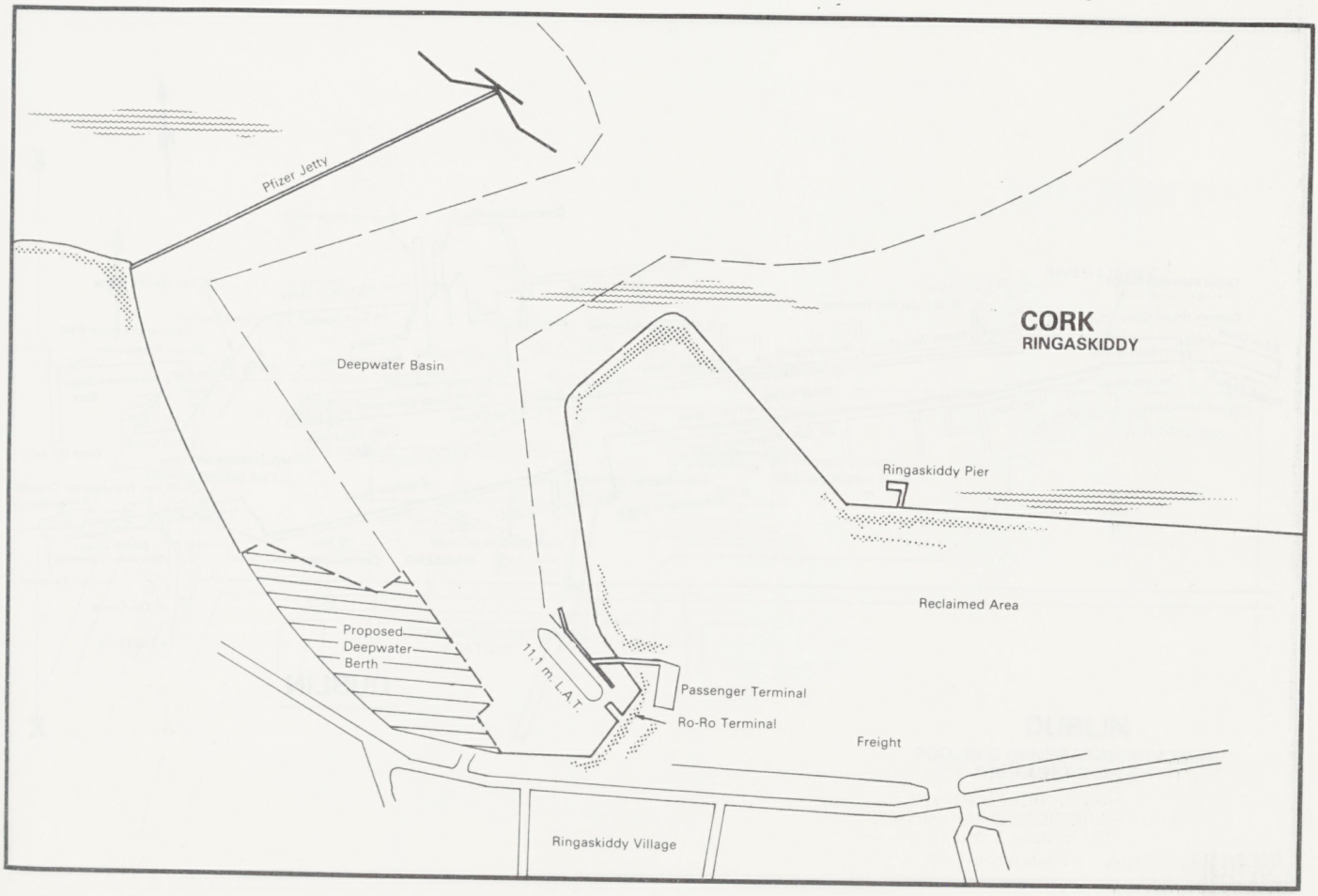
IRISH REFINING CO. JETTY
(Private)

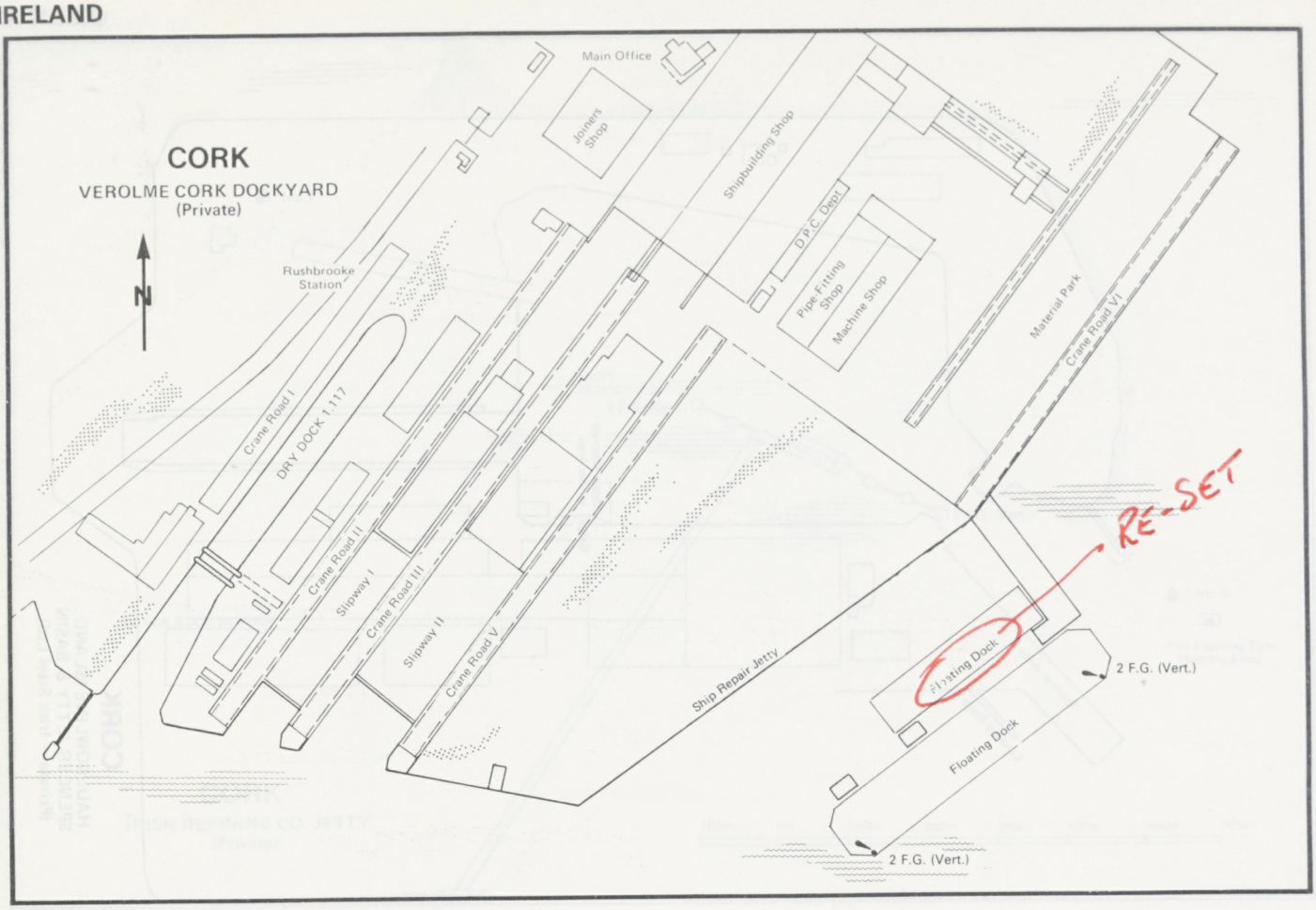


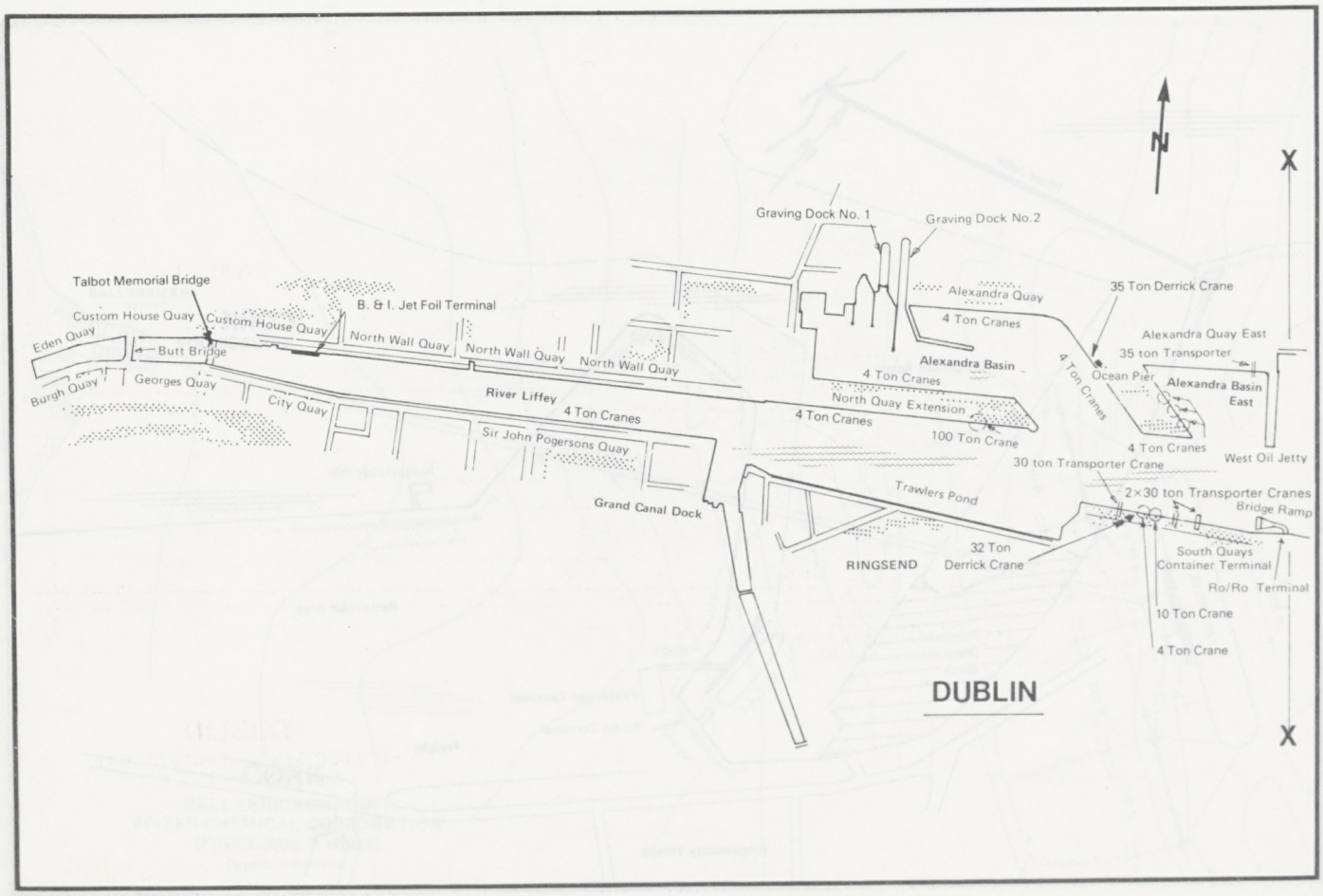
CORK

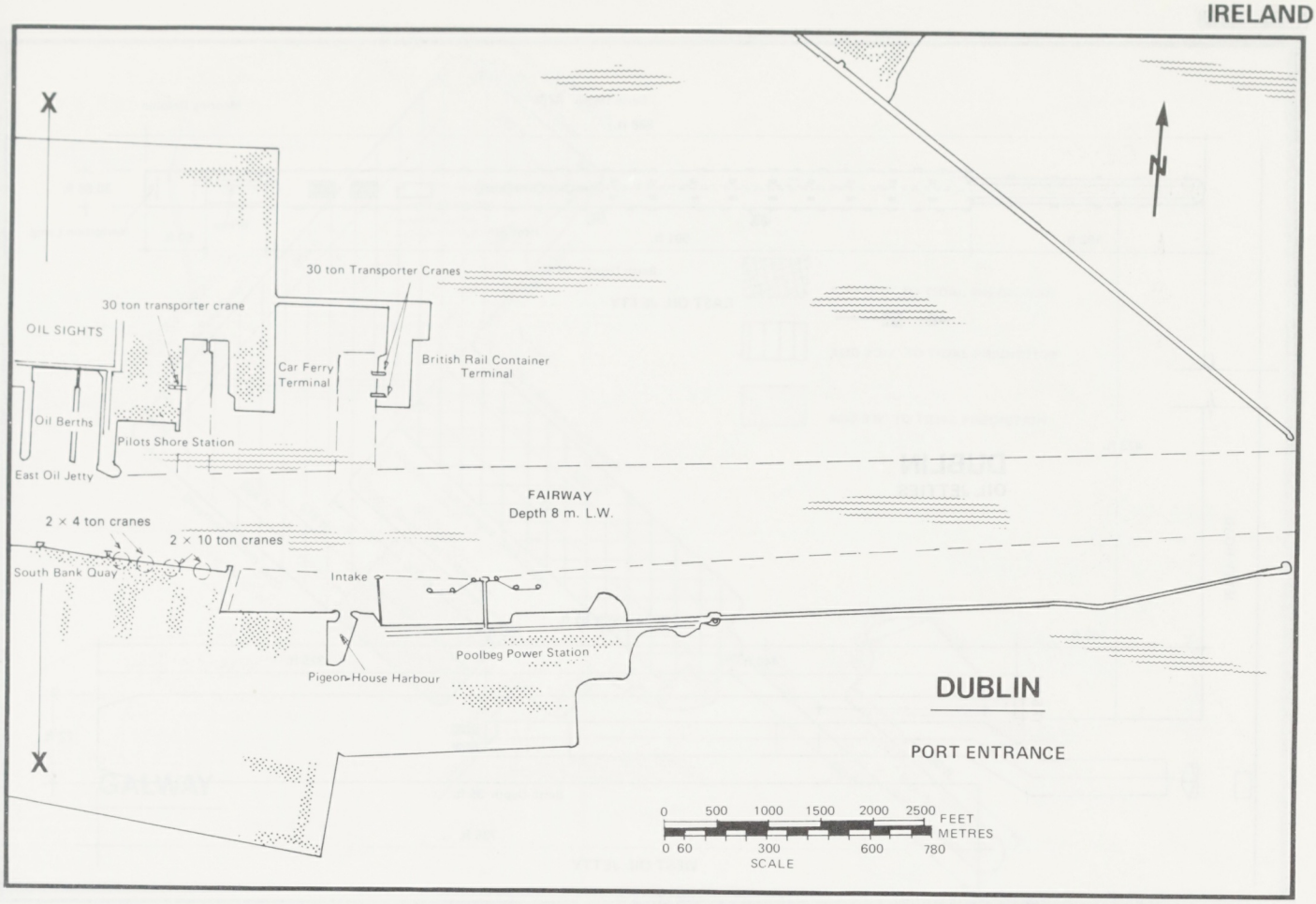
BALLYBRICKEN POINT
PFIZER CHEMICAL CORPORATION
(Private Jetty & Wharf)
Depths in fathoms

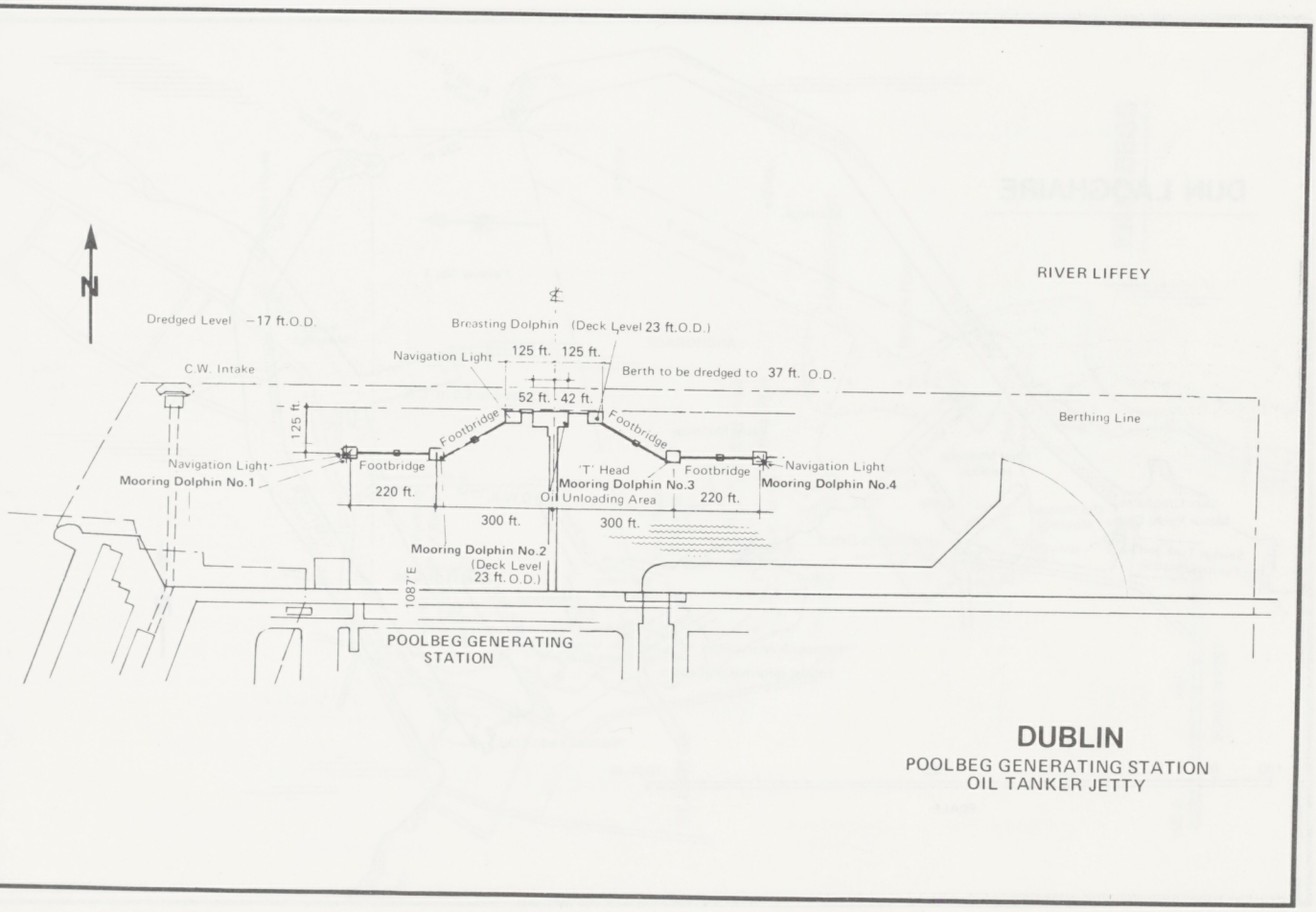

Boats Moored in this Area
Barge
Spencer Jetty
Landing Stage
CORK
HAULBOWLINE ISLAND
SPENCER JETTY & BASIN
(Private – Irish Steel Ltd)

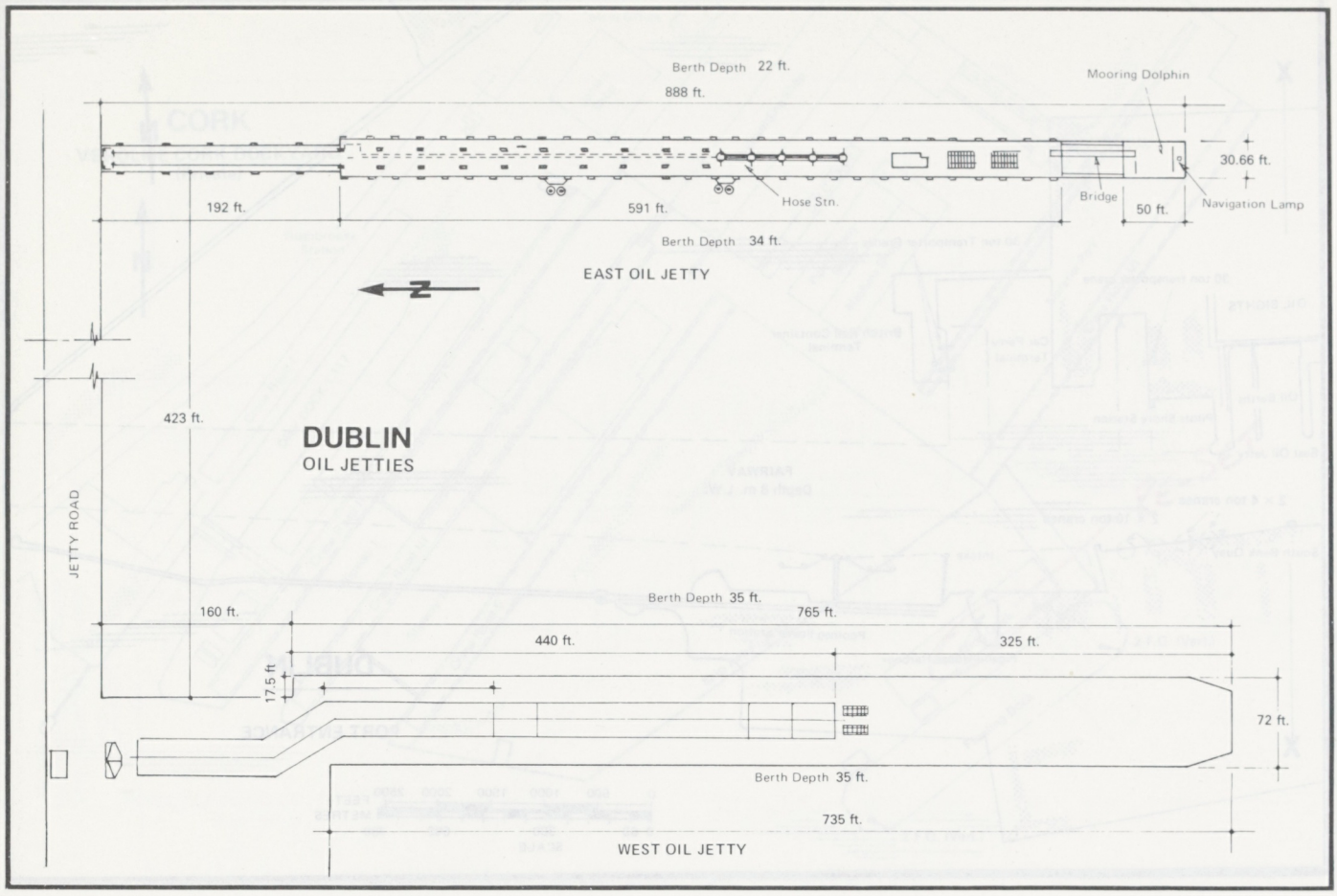

Pfizer Jetty
Deepwater Basin
CORK
RINGASKIDDY
Ringaskiddy Pier
Reclaimed Area
Proposed Deepwater Berth
11.1 m. L.A.T.
Passenger Terminal
Ro-Ro Terminal
Freight
Ringaskiddy Village

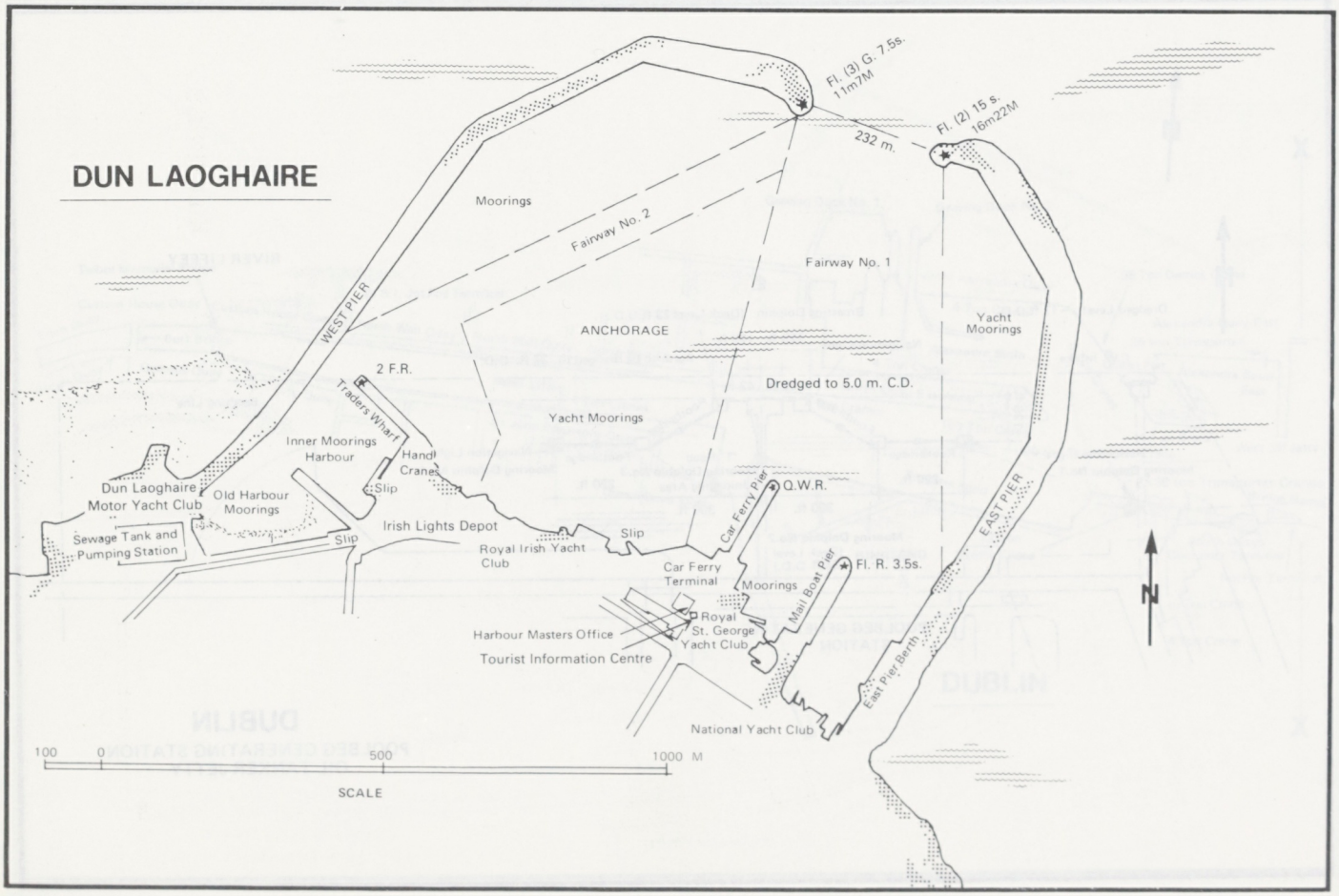

CORK
VEROLME CORK DOCKYARD
(Private)
N
Rushbrooke Station
Main Office
Joiners Shop
Shipbuilding Shop
D.P.C. Dept.
Pipe Fitting Shop
Machine Shop
Material Park
Crane Road VI
Crane Road I
DRY DOCK 1,117
Crane Road II
Slipway I
Crane Road III
Slipway II
Crane Road V
Ship Repair Jetty
RE-SET
Floating Dock
2 F.G. (Vert.)
Floating Dock
2 F.G. (Vert.)

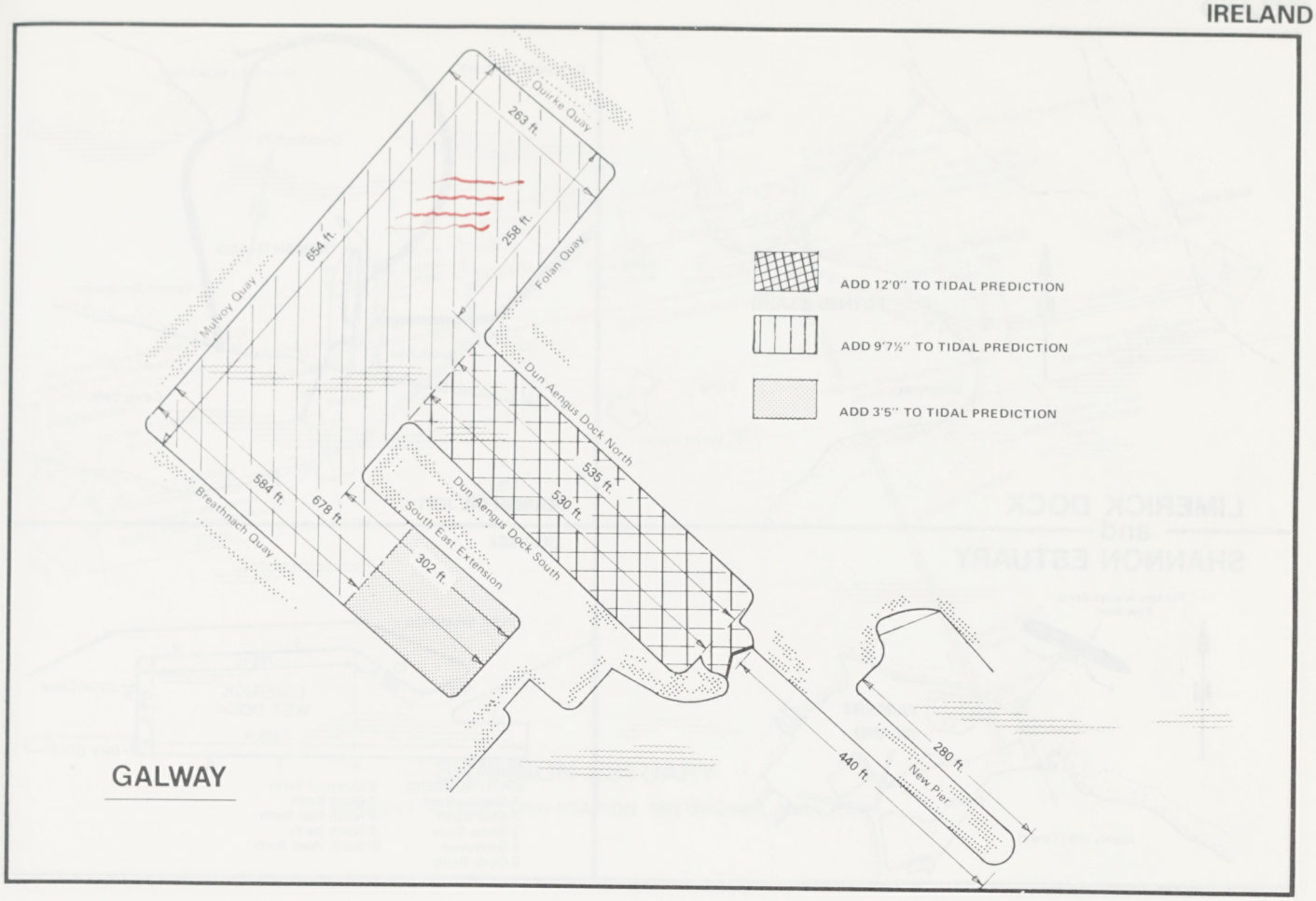

N
X
Graving Dock No. 1
Graving Dock No.2
Talbot Memorial Bridge
Custom House Quay
Custom House Quay
B. & I. Jet Foil Terminal
Eden Quay
Butt Bridge
North Wall Quay
North Wall Quay
North Wall Quay
Alexandra Quay
4 Ton Cranes
35 Ton Derrick Crane
Alexandra Quay East
35 ton Transporter
Alexandra Basin
4 Ton Cranes
Ocean Pier
Alexandra Basin East
Burgh Quay
Georges Quay
City Quay
River Liffey
4 Ton Cranes
4 Ton Cranes
North Quay Extension
4 Ton Cranes
4 Ton Cranes
100 Ton Crane
4 Ton Cranes
West Oil Jetty
Sir John Pogersons Quay
30 ton Transporter Crane
2×30 ton Transporter Cranes
Bridge Ramp
Grand Canal Dock
Trawlers Pond
South Quays Container Terminal
RINGSEND
32 Ton Derrick Crane
Ro/Ro Terminal
10 Ton Crane
4 Ton Crane
DUBLIN
X

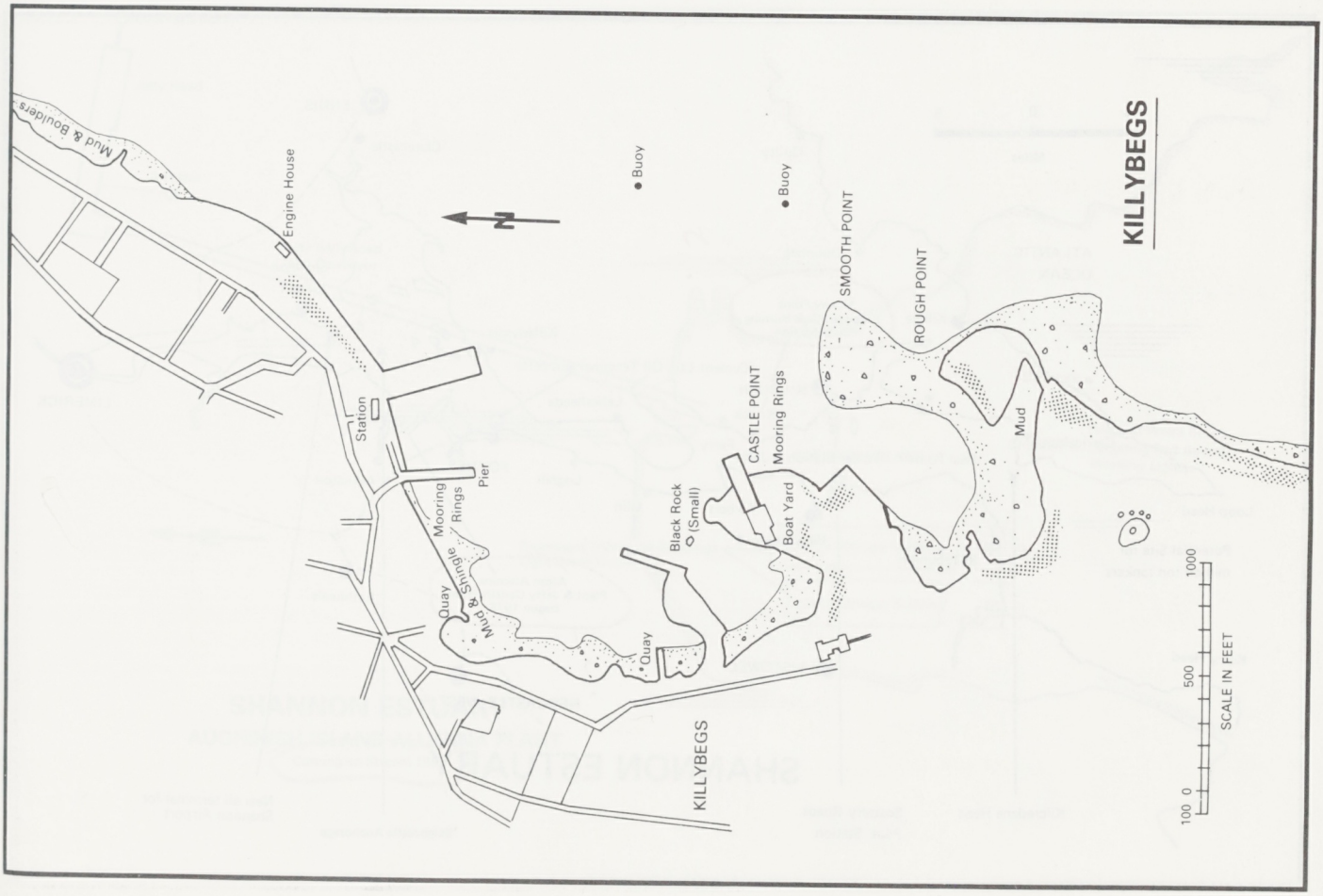

X
N
30 ton Transporter Cranes
30 ton transporter crane
OIL SIGHTS
Car Ferry Terminal
British Rail Container Terminal
Oil Berths
Pilots Shore Station
East Oil Jetty
FAIRWAY
Depth 8 m. L.W.
2 × 4 ton cranes
2 × 10 ton cranes
South Bank Quay
Intake
Poolbeg Power Station
Pigeon House Harbour
X
DUBLIN
PORT ENTRANCE
0 500 1000 1500 2000 2500 FEET
0 60 300 600 780 METRES
SCALE

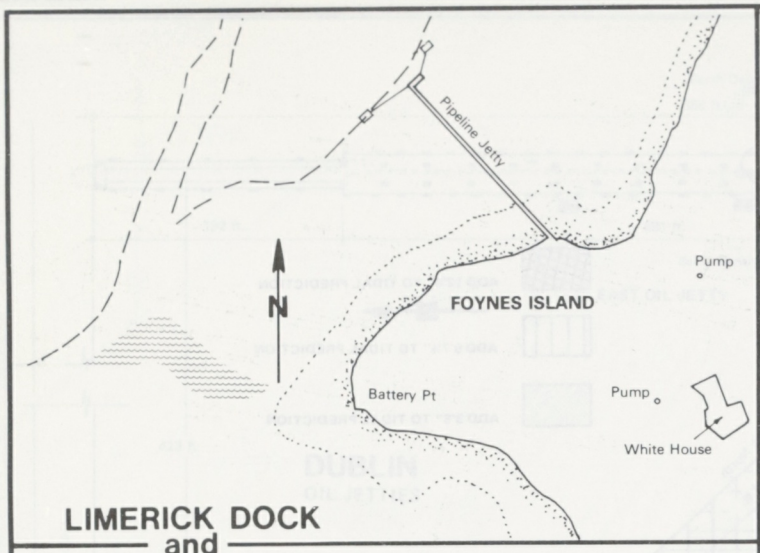

N
RIVER LIFFEY
Dredged Level −17 ft.O.D.
Breasting Dolphin (Deck Level 23 ft.O.D.)
Navigation Light
125 ft. 125 ft.
C.W. Intake
Berth to be dredged to 37 ft. O.D.
52 ft. 42 ft.
125 ft.
Footbridge
Footbridge
Berthing Line
Navigation Light
Mooring Dolphin No.1
Footbridge
220 ft.
'T' Head
Mooring Dolphin No.3
Oil Unloading Area
Footbridge
Navigation Light
Mooring Dolphin No.4
220 ft.
300 ft.
300 ft.
Mooring Dolphin No.2
(Deck Level 23 ft. O.D.)
1087 E
POOLBEG GENERATING STATION
DUBLIN
POOLBEG GENERATING STATION
OIL TANKER JETTY


Berth Depth 22 ft.
888 ft.
Mooring Dolphin
30.66 ft.
192 ft.
591 ft.
Hose Stn.
Bridge
50 ft.
Navigation Lamp
Berth Depth 34 ft.
EAST OIL JETTY
423 ft.
DUBLIN
OIL JETTIES
JETTY ROAD
Berth Depth 35 ft.
160 ft.
765 ft.
440 ft.
325 ft.
17.5 ft
72 ft.
Berth Depth 35 ft.
735 ft.
WEST OIL JETTY

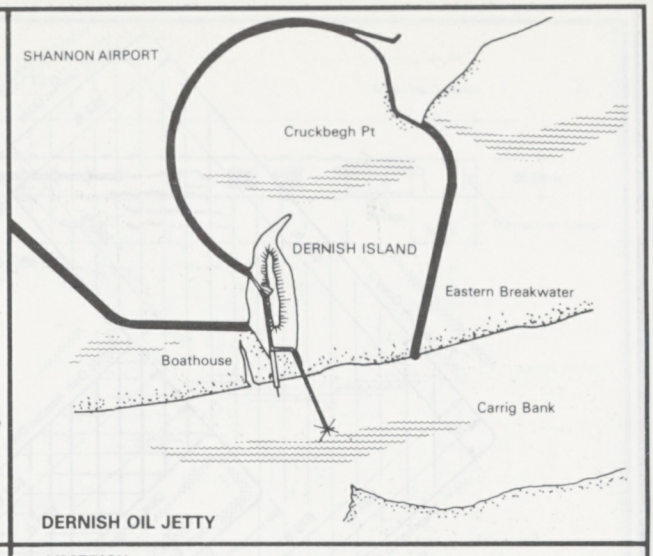

DUN LAOGHAIRE
Fl. (3) G. 7.5s. 11m7M
Fl. (2) 15 s. 16m22M
232 m.
Moorings
Fairway No. 2
Fairway No. 1
WEST PIER
ANCHORAGE
Yacht Moorings
2 F.R.
Traders Wharf
Dredged to 5.0 m. C.D.
Yacht Moorings
Inner Moorings
Harbour
Hand Cranes
Slip
Dun Laoghaire Motor Yacht Club
Old Harbour Moorings
Q.W.R.
Car Ferry Pier
EAST PIER
Sewage Tank and Pumping Station
Slip
Irish Lights Depot
Royal Irish Yacht Club
Slip
Car Ferry Terminal
Moorings
Mail Boat Pier
Fl. R. 3.5s.
Royal St. George Yacht Club
Harbour Masters Office
Tourist Information Centre
East Pier Berth
National Yacht Club
N
100 0 500 1000 M
SCALE


GALWAY
Quirke Quay
263 ft.
258 ft.
654 ft.
Mulvoy Quay
Folan Quay
Dun Aengus Dock North
535 ft.
530 ft.
Dun Aengus Dock South
South East Extension
584 ft.
678 ft.
302 ft.
Breathnach Quay
ADD 12'0" TO TIDAL PREDICTION
ADD 9'7½" TO TIDAL PREDICTION
ADD 3'5" TO TIDAL PREDICTION
440 ft.
280 ft.
New Pier

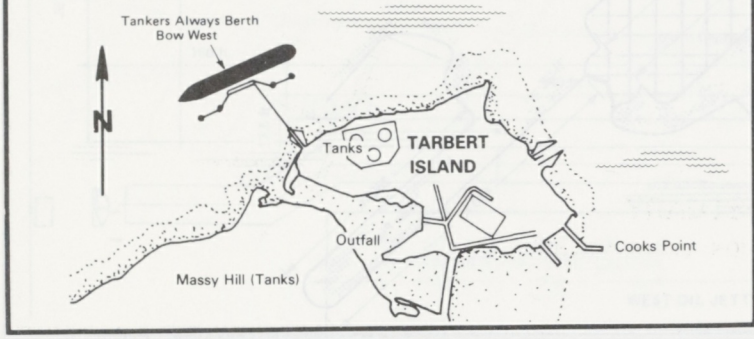

KILLYBEGS
Mud & Boulders
Engine House
Station
Pier
Mooring Rings
Mud & Shingle
Quay
Quay
Black Rock
(Small)
CASTLE POINT
Mooring Rings
Boat Yard
Buoy
Buoy
SMOOTH POINT
ROUGH POINT
Mud
KILLYBEGS
SCALE IN FEET
100 0
500
1000



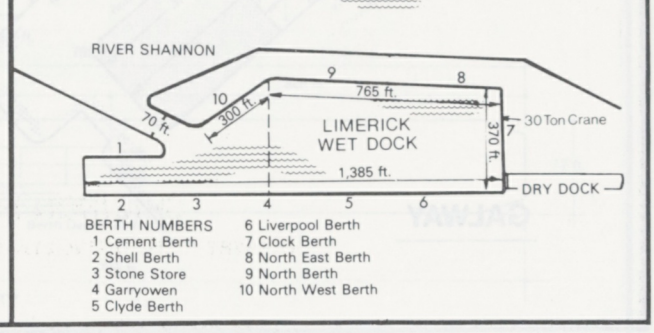
LIMERICK DOCK and SHANNON ESTUARY



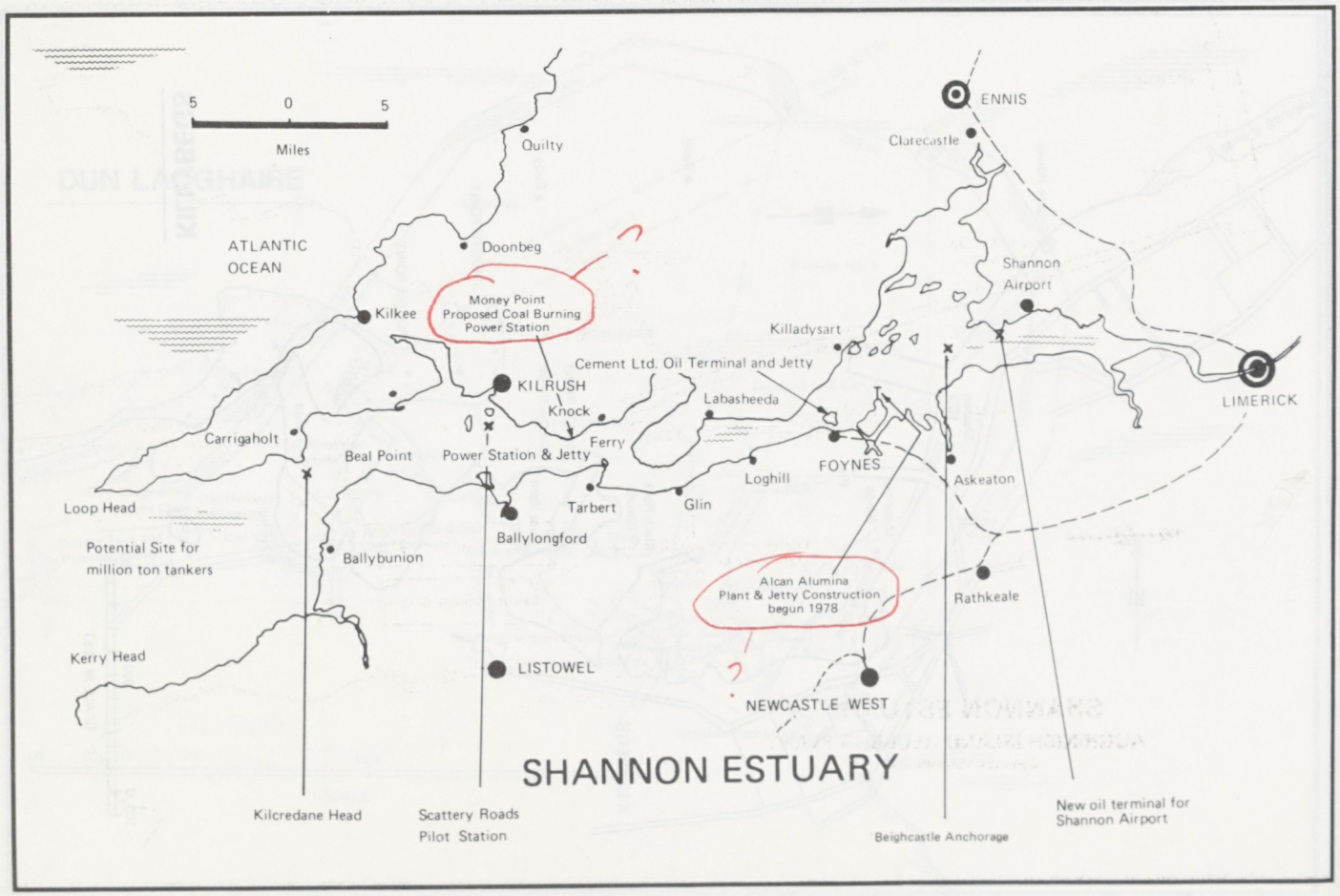
DERNISH OIL JETTY

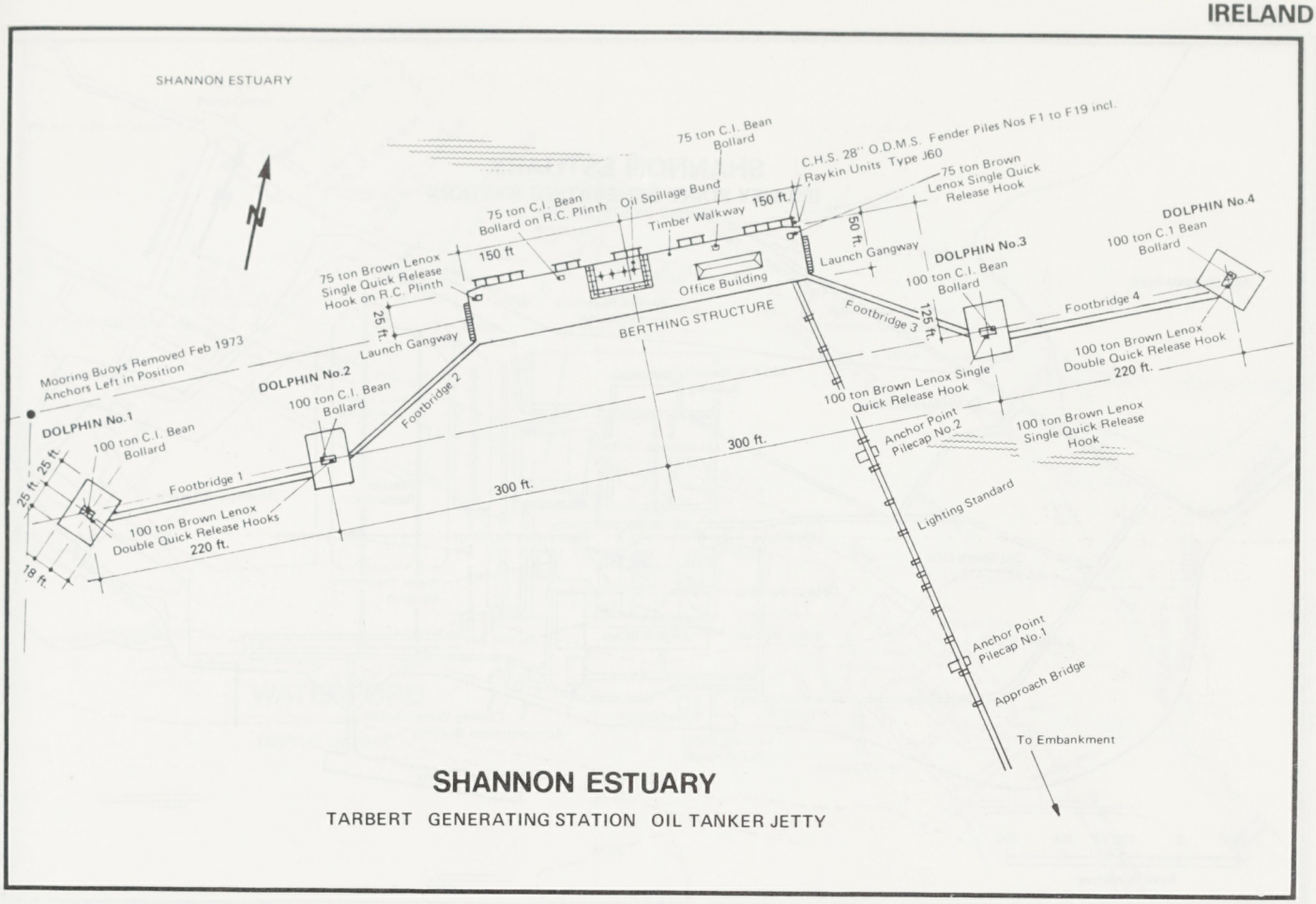


LIMERICK



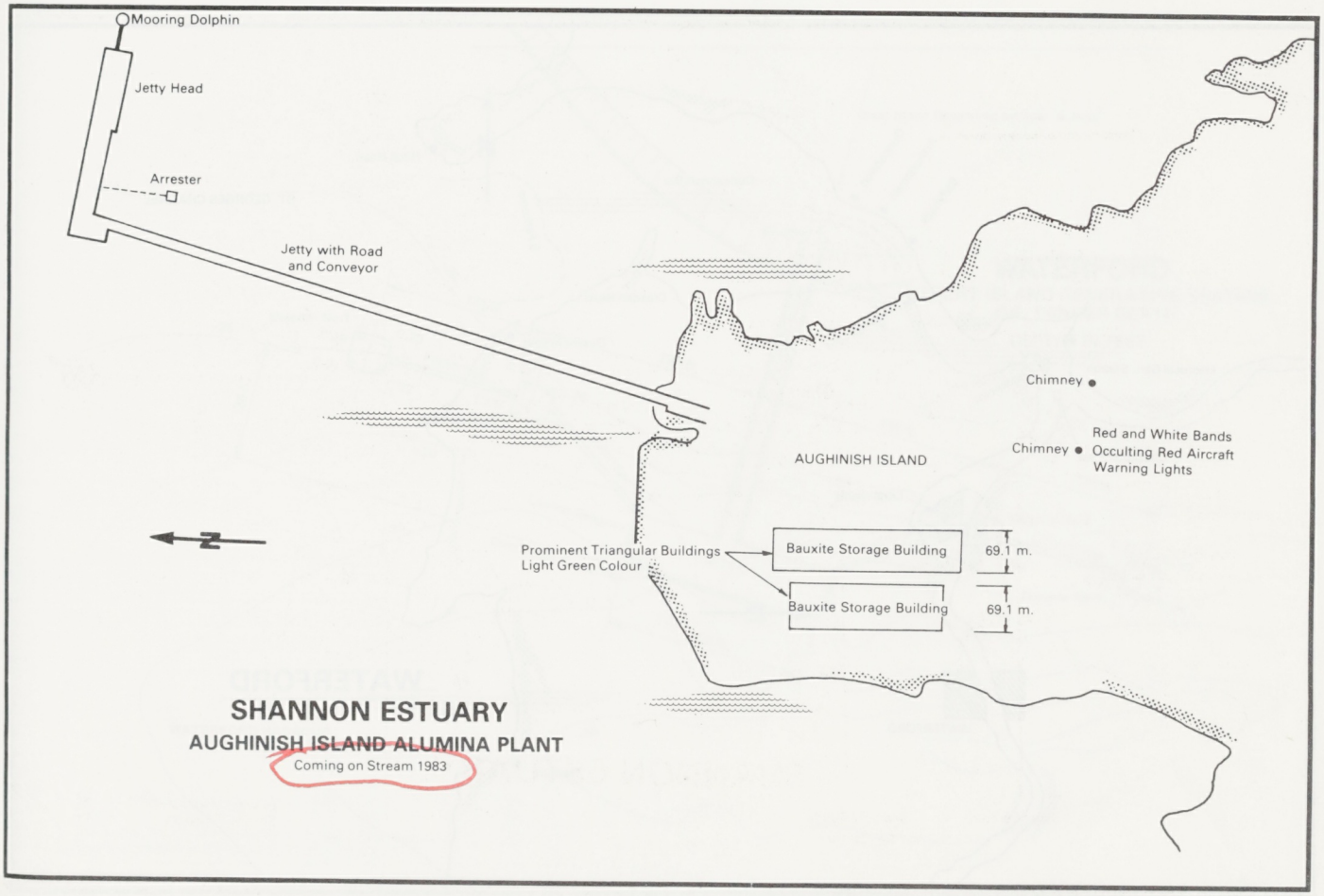
BERTH NUMBERS
1 Cement Berth
2 Shell Berth
3 Stone Store
4 Garryowen
5 Clyde Berth
6 Liverpool Berth
7 Clock Berth
8 North East Berth
9 North Berth
10 North West Berth





SHANNON ESTUARY

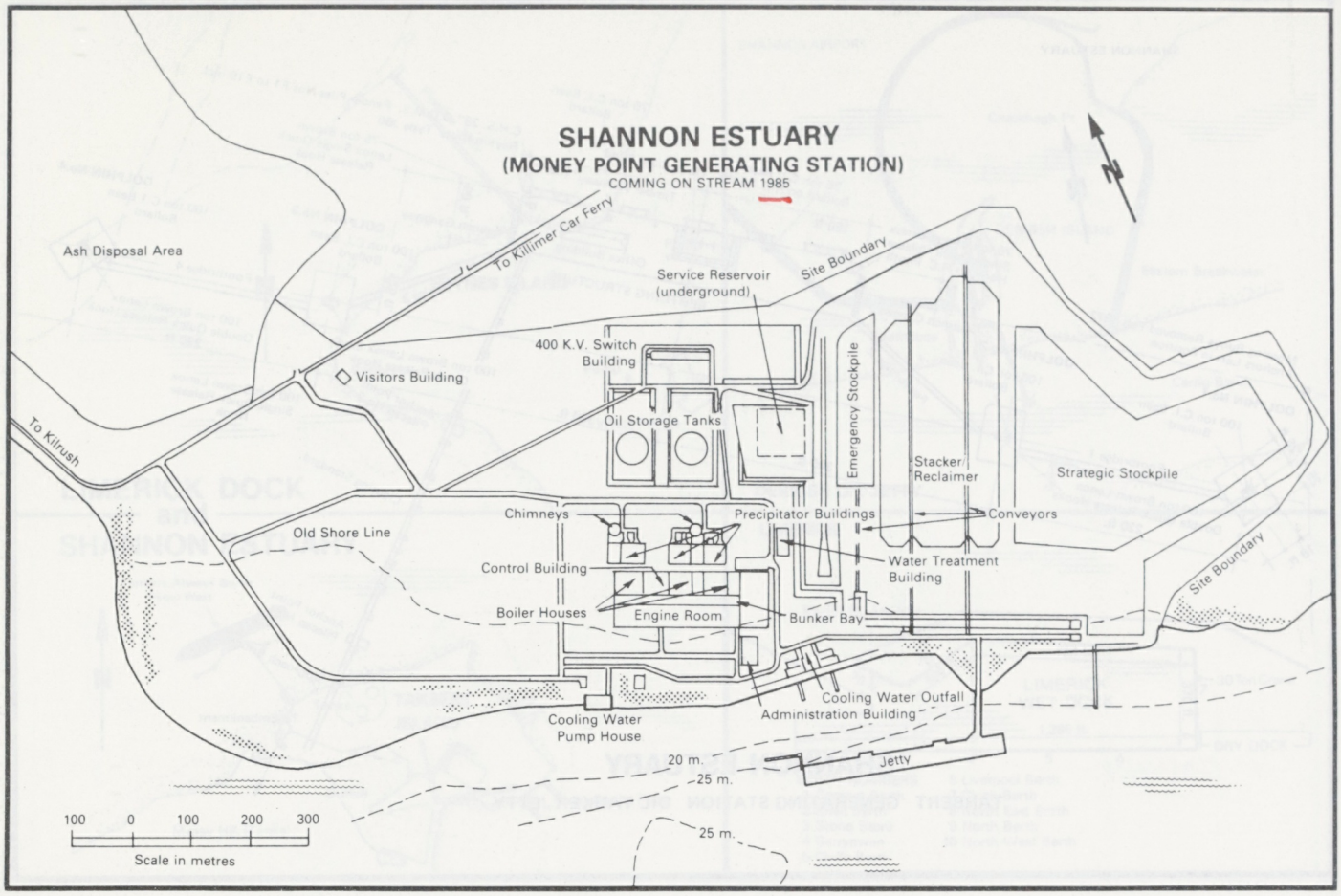
TARBERT GENERATING STATION OIL TANKER JETTY

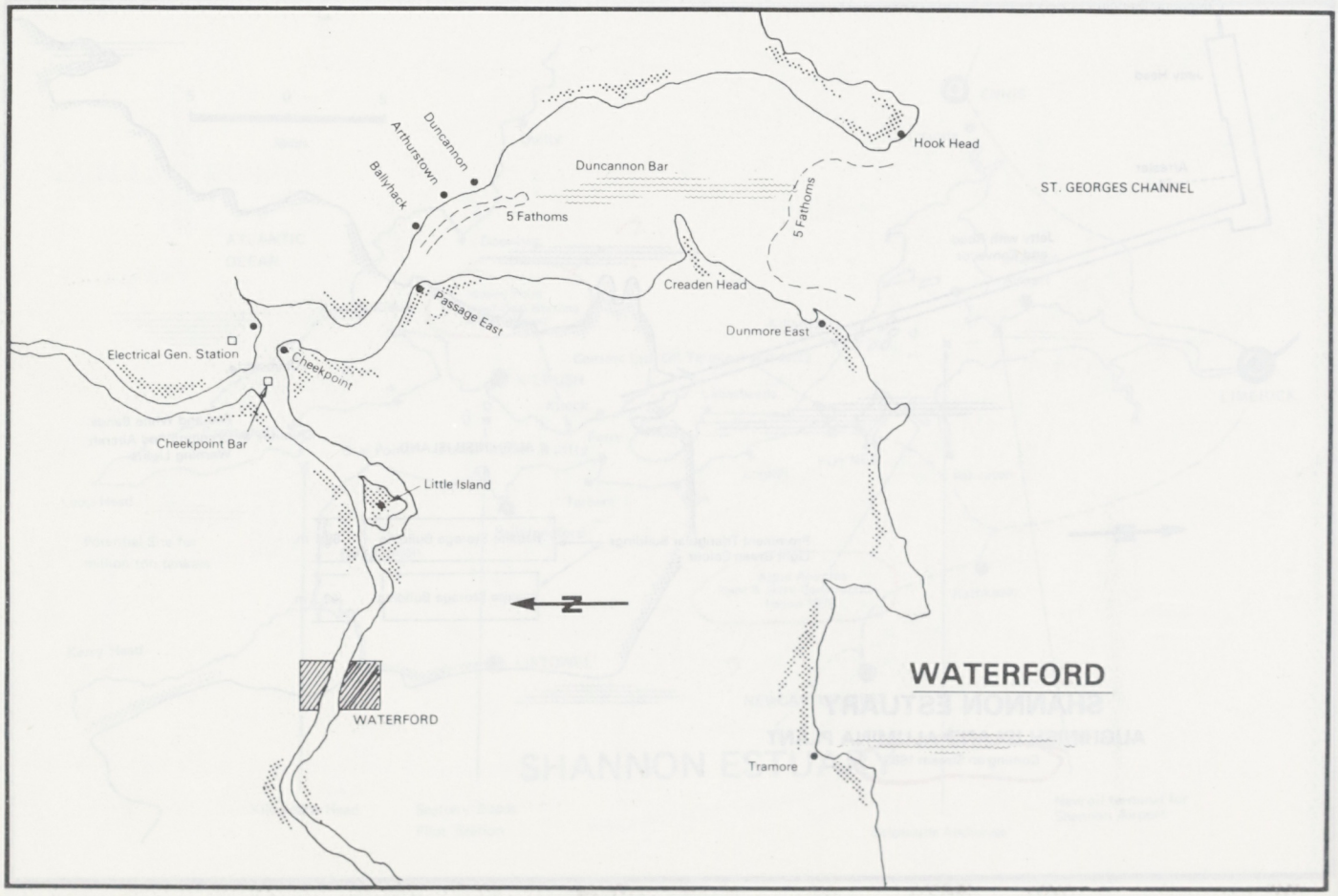


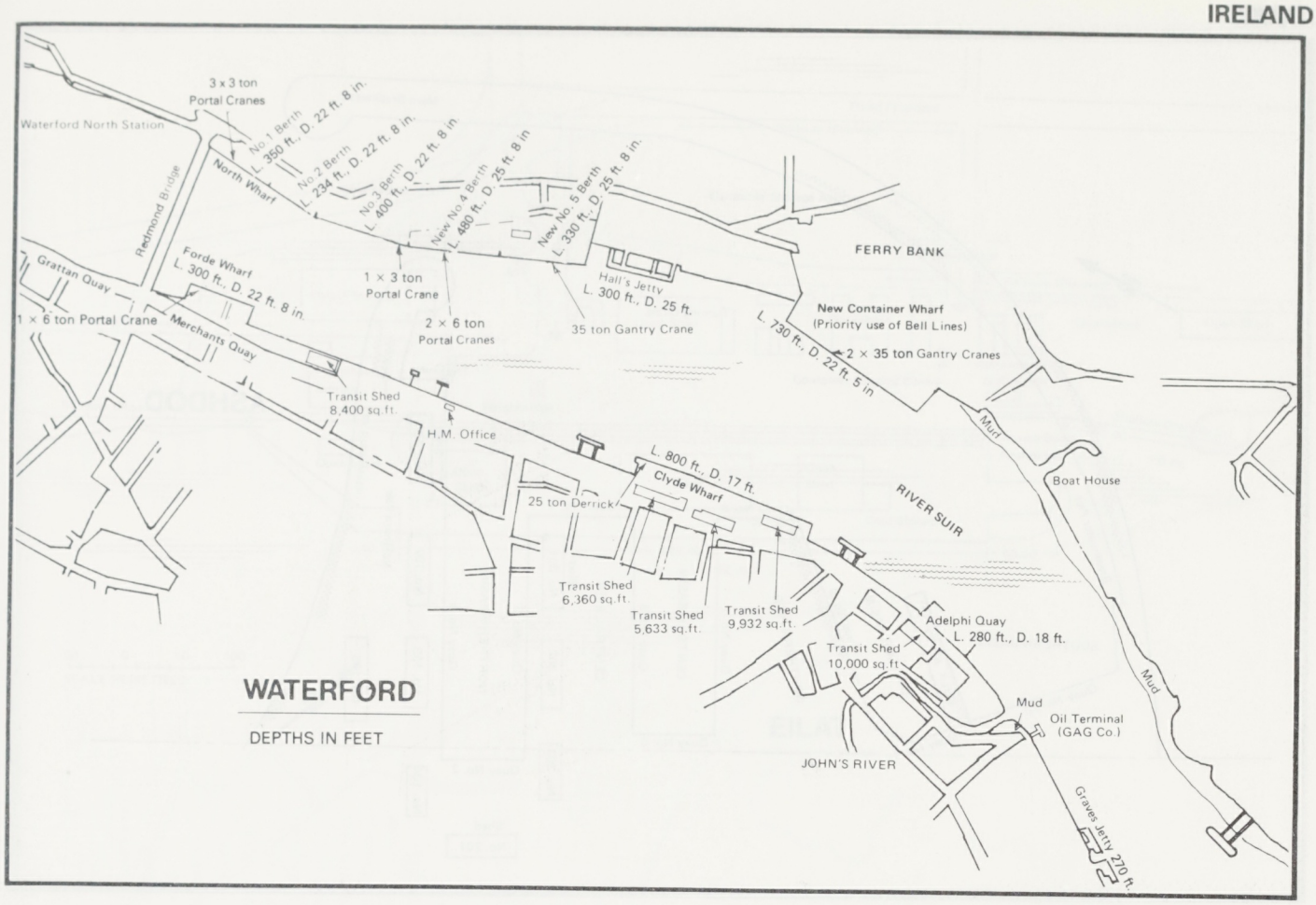
SHANNON ESTUARY

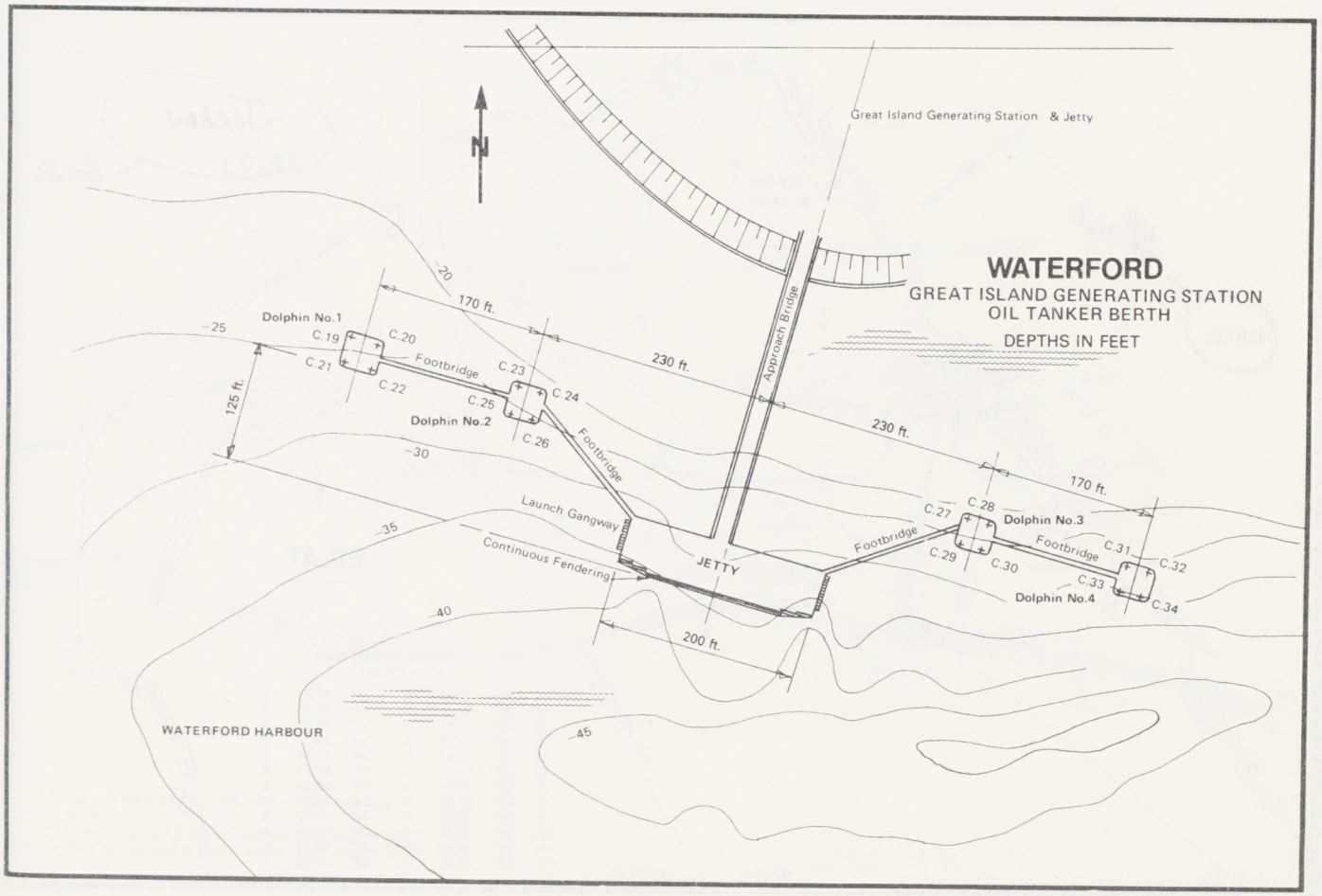
AUGHINISH ISLAND ALUMINA PLANT

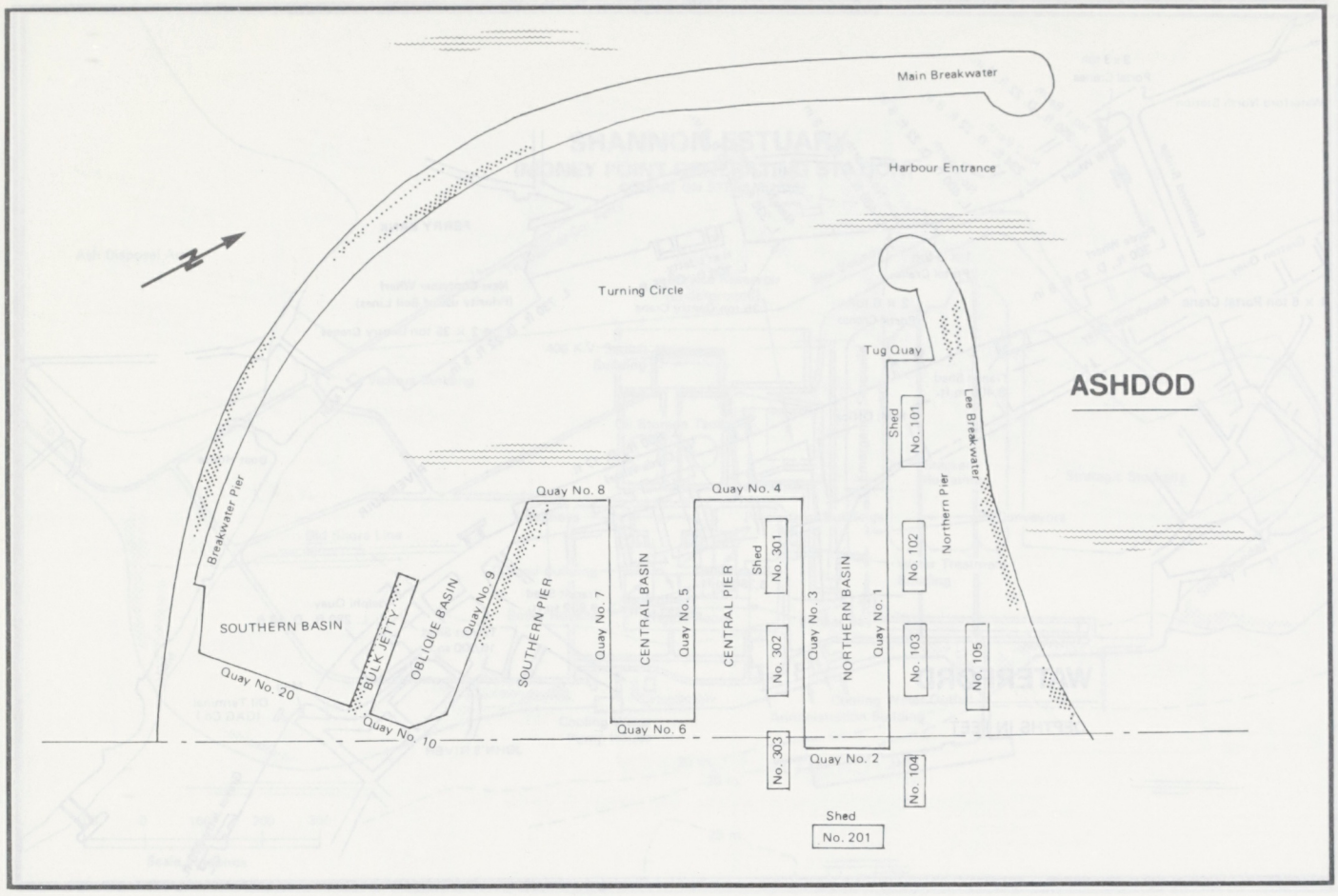
Coming on Stream 1983

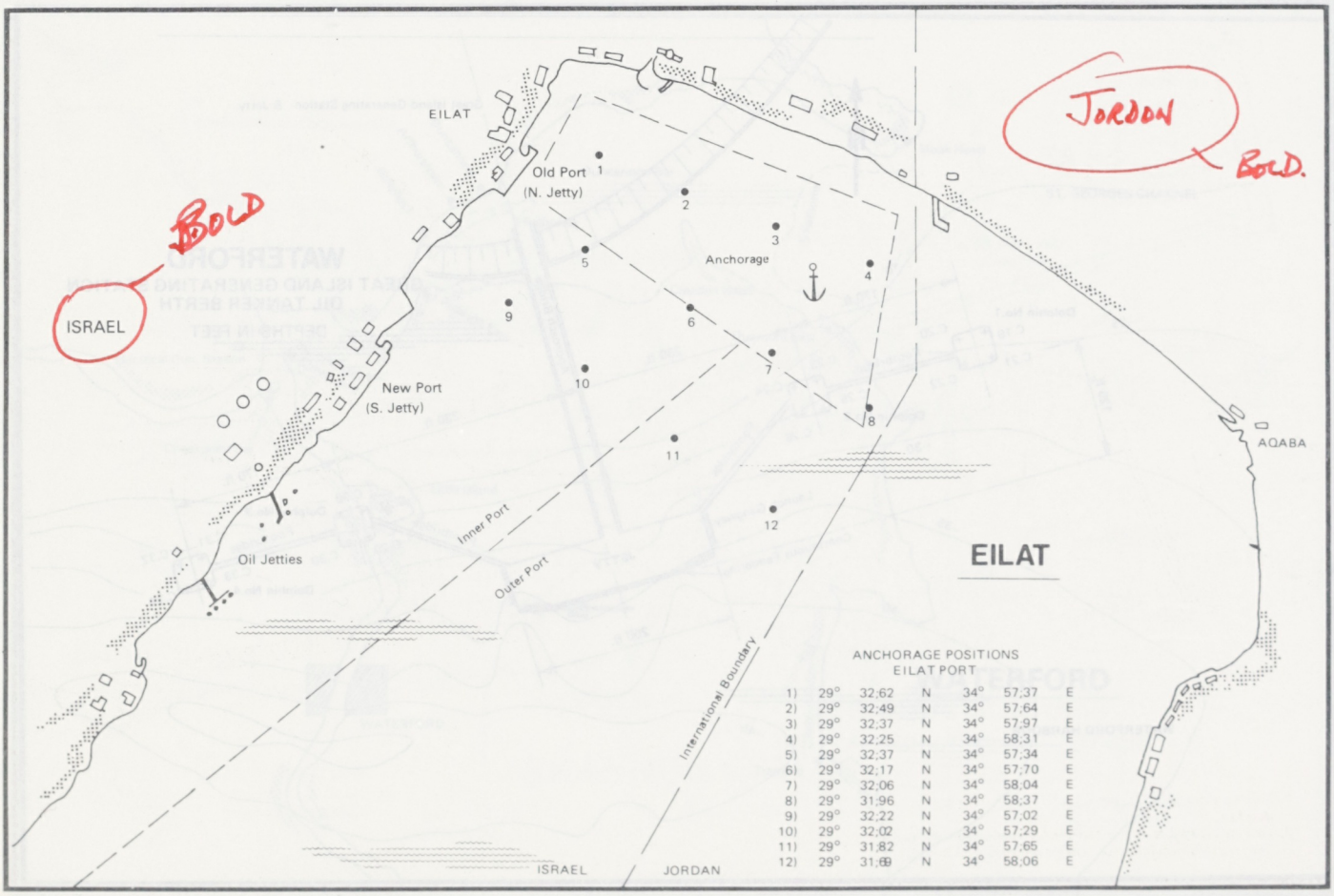

SHANNON ESTUARY
(MONEY POINT GENERATING STATION)
COMING ON STREAM 1985
N
Ash Disposal Area
To Killimer Car Ferry
Site Boundary
Service Reservoir
(underground)
400 K.V. Switch
Building
Visitors Building
Oil Storage Tanks
Emergency Stockpile
Stacker/
Reclaimer
Strategic Stockpile
To Kilrush
Chimneys
Precipitator Buildings
Conveyors
Old Shore Line
Control Building
Water Treatment
Building
Site Boundary
Boiler Houses
Engine Room
Bunker Bay
Cooling Water Outfall
Administration Building
Cooling Water
Pump House
Jetty
20 m.
25 m.
25 m.
100 0 100 200 300
Scale in metres

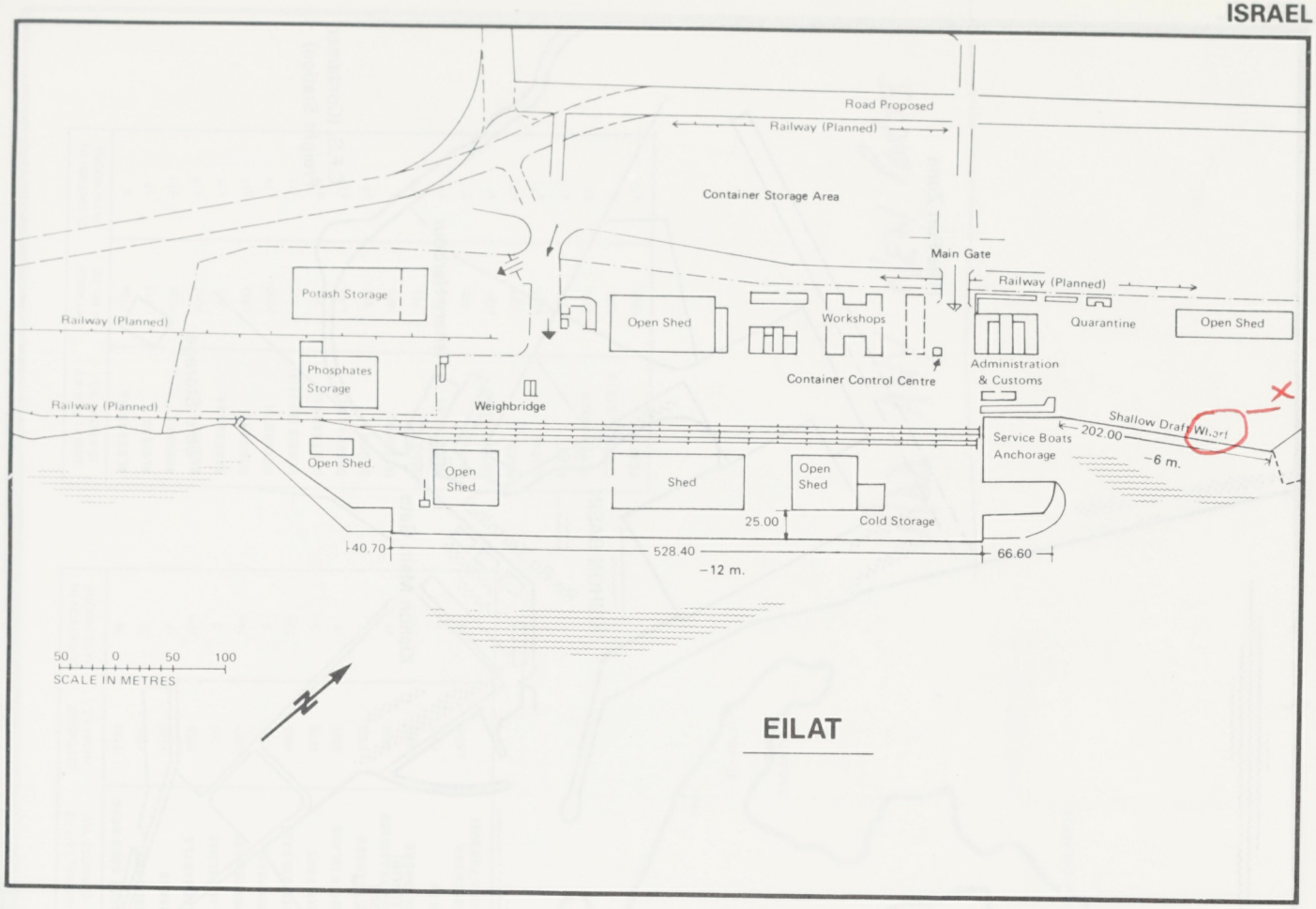

Duncannon
Arthurstown
Ballyhack
Duncannon Bar
5 Fathoms
5 Fathoms
Hook Head
ST. GEORGES CHANNEL
Creaden Head
Passage East
Dunmore East
Electrical Gen. Station
Cheekpoint
Cheekpoint Bar
Little Island
N
WATERFORD
WATERFORD
Tramore

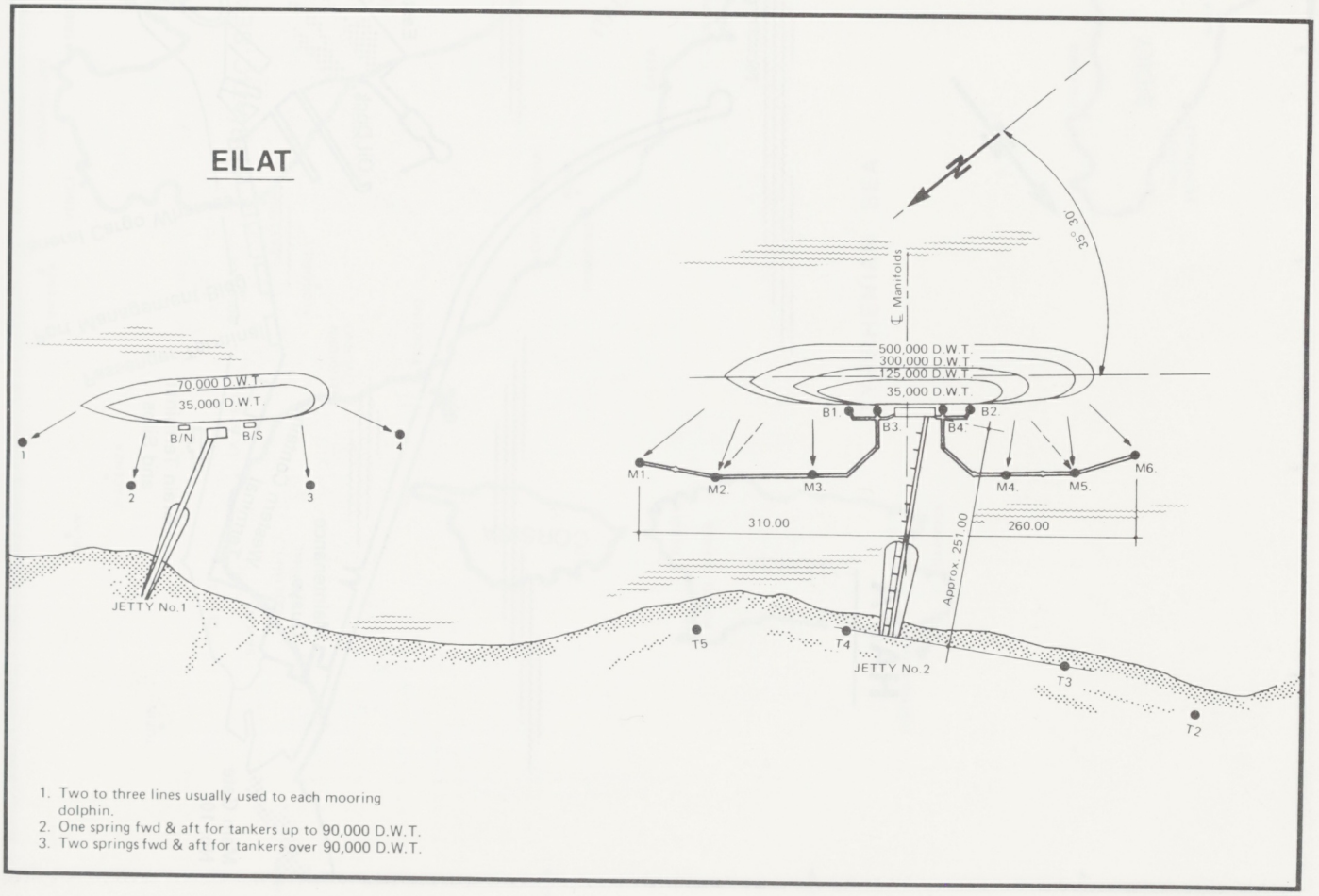

3 x 3 ton Portal Cranes
Waterford North Station
No.1 Berth L. 350 ft., D. 22 ft. 8 in.
No.2 Berth L. 234 ft., D. 22 ft. 8 in.
No.3 Berth L. 400 ft., D. 22 ft. 8 in.
New No.4 Berth L. 480 ft., D. 25 ft. 8 in.
New No.5 Berth L. 330 ft., D. 25 ft. 8 in.
Redmond Bridge
North Wharf
Grattan Quay
Forde Wharf L. 300 ft., D. 22 ft. 8 in.
1 x 6 ton Portal Crane
Merchants Quay
1 x 3 ton Portal Crane
2 x 6 ton Portal Cranes
Hall's Jetty L. 300 ft., D. 25 ft.
35 ton Gantry Crane
FERRY BANK
New Container Wharf (Priority use of Bell Lines)
L. 730 ft., D. 22 ft. 5 in.
2 x 35 ton Gantry Cranes
Transit Shed 8,400 sq.ft.
H.M. Office
L. 800 ft., D. 17 ft.
Clyde Wharf
25 ton Derrick
RIVER SUIR
Mud
Boat House
Transit Shed 6,360 sq.ft.
Transit Shed 5,633 sq.ft.
Transit Shed 9,932 sq.ft.
Adelphi Quay L. 280 ft., D. 18 ft.
Transit Shed 10,000 sq.ft.
Mud
Oil Terminal (GAG Co.)
JOHN'S RIVER
Graves Jetty 270 ft.
WATERFORD
DEPTHS IN FEET


Great Island Generating Station & Jetty
N
WATERFORD
GREAT ISLAND GENERATING STATION
OIL TANKER BERTH
DEPTHS IN FEET
Approach Bridge
Dolphin No.1
C.19
C.20
C.21
C.22
Footbridge
C.23
C.24
C.25
C.26
Dolphin No.2
Footbridge
Launch Gangway
Continuous Fendering
JETTY
C.27
C.28
Dolphin No.3
Footbridge
C.29
C.30
C.31
C.32
C.33
Dolphin No.4
C.34
170 ft.
230 ft.
125 ft.
200 ft.
-20
-25
-30
-35
-40
-45
WATERFORD HARBOUR

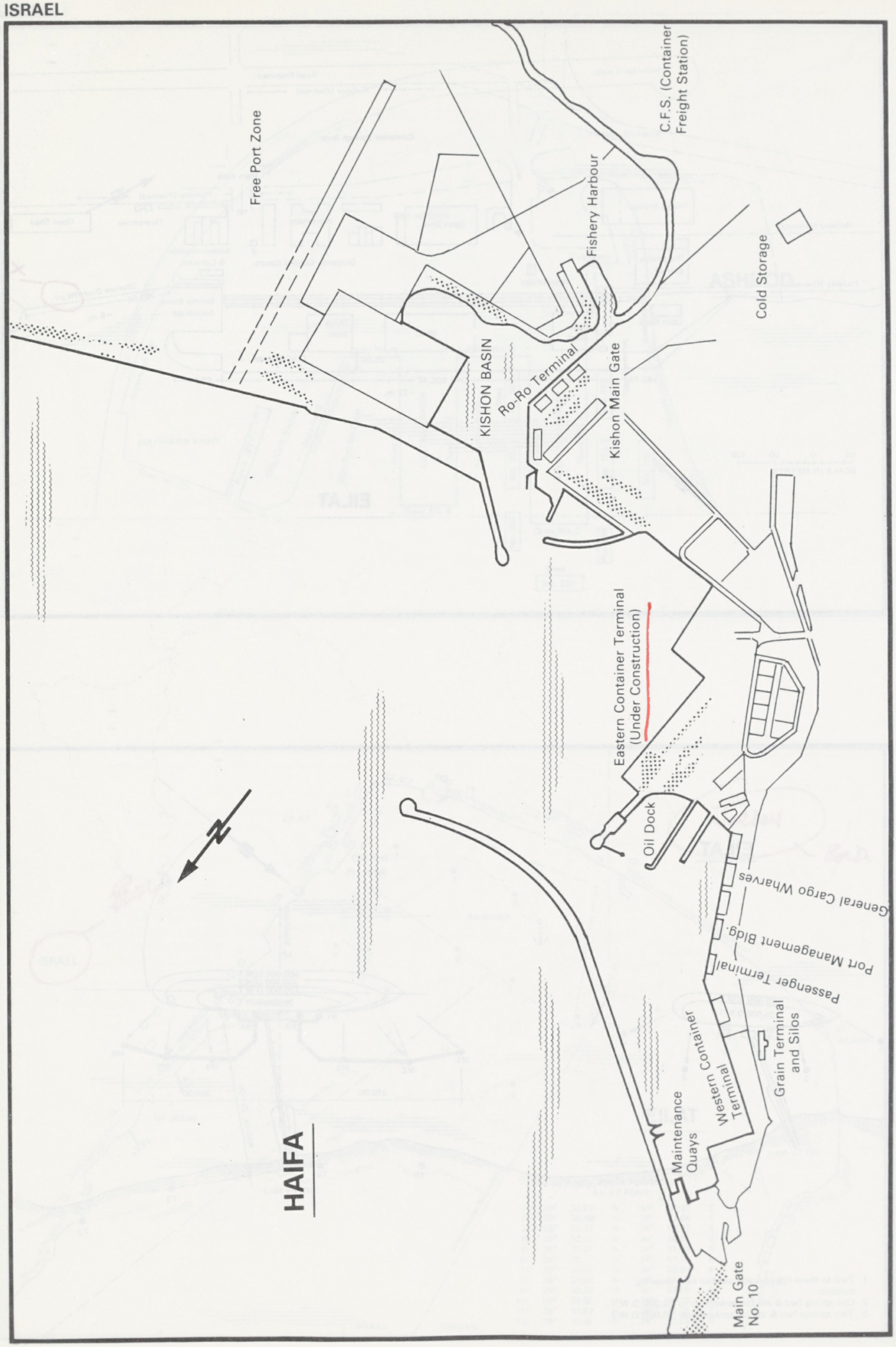

Main Breakwater
Harbour Entrance
Turning Circle
Tug Quay
ASHDOD
Lee Breakwater
Northern Pier
Shed
No. 101
No. 102
No. 103
No. 105
Breakwater Pier
SOUTHERN BASIN
Quay No. 20
BULK JETTY
OBLIQUE BASIN
Quay No. 9
Quay No. 8
SOUTHERN PIER
Quay No. 7
CENTRAL BASIN
Quay No. 5
Quay No. 4
CENTRAL PIER
Shed
No. 301
No. 302
No. 303
Quay No. 3
NORTHERN BASIN
Quay No. 1
Quay No. 10
Quay No. 6
Quay No. 2
No. 104
Shed
No. 201


EILAT
Old Port
(N. Jetty)
Anchorage
New Port
(S. Jetty)
Oil Jetties
Inner Port
Outer Port
ISRAEL
JORDAN
AQABA
EILAT
International Boundary
ANCHORAGE POSITIONS
EILAT PORT
1) 29° 32;62 N 34° 57;37 E
2) 29° 32;49 N 34° 57;64 E
3) 29° 32;37 N 34° 57;97 E
4) 29° 32;25 N 34° 58;31 E
5) 29° 32;37 N 34° 57;34 E
6) 29° 32;17 N 34° 57;70 E
7) 29° 32;06 N 34° 58;04 E
8) 29° 31;96 N 34° 58;37 E
9) 29° 32;22 N 34° 57;02 E
10) 29° 32;02 N 34° 57;29 E
11) 29° 31;82 N 34° 57;65 E
12) 29° 31;69 N 34° 58;06 E





1. Two to three lines usually used to each mooring dolphin.
2. One spring fwd & aft for tankers up to 90,000 D.W.T.
3. Two springs fwd & aft for tankers over 90,000 D.W.T.


HAIFA
Free Port Zone
KISHON BASIN
Ro-Ro Terminal
Fishery Harbour
C.F.S. (Container Freight Station)
Cold Storage
Kishon Main Gate
Eastern Container Terminal (Under Construction)
Oil Dock
General Cargo Wharves
Port Management Bldg.
Passenger Terminal
Grain Terminal and Silos
Western Container Terminal
Maintenance Quays
Main Gate No. 10

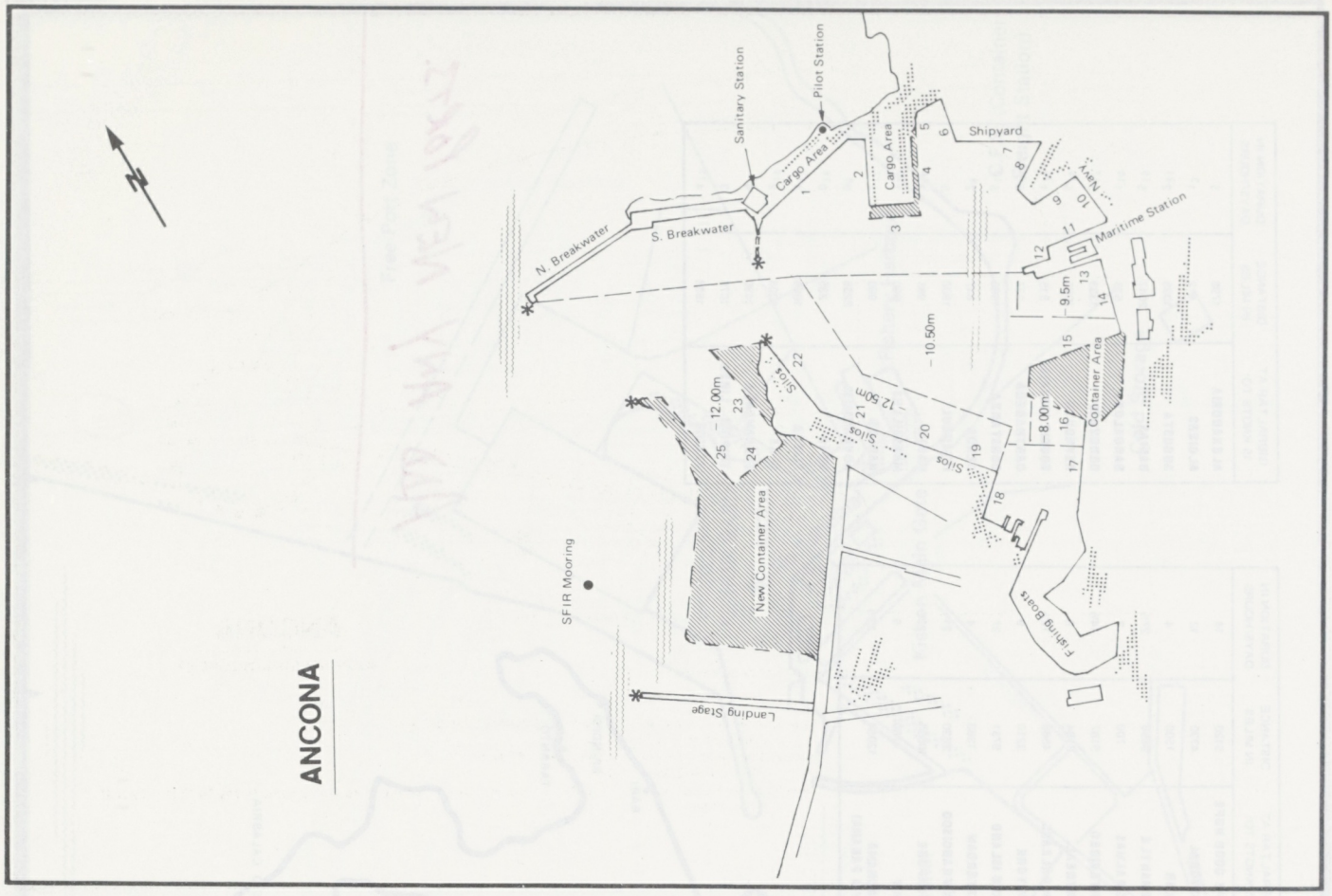
GIBRALTAR AT 15 KNOTS TO:	DISTANCE IN MILES	DURATION IN DAYS/HOURS
CAPE GOOD HOPE	5120	14
CRISTOBAL	4330	12
DAKAR	1500	4
FREMANTLE	9856	27½
LAS PALMAS	700	2
MONTEVIDEO	5187	14½
MONTREAL	3184	9
NEW ORLEANS	4568	12½
NEW YORK	3210	9
QUOIN ISLAND	9731	27
ROTTERDAM	1363	4
SAN FRANCISCO	7620	21
SINGAPORE	10686	29½
SKAW	1760	5
YOKOHAMA (VIA PANAMA)	12054	33½

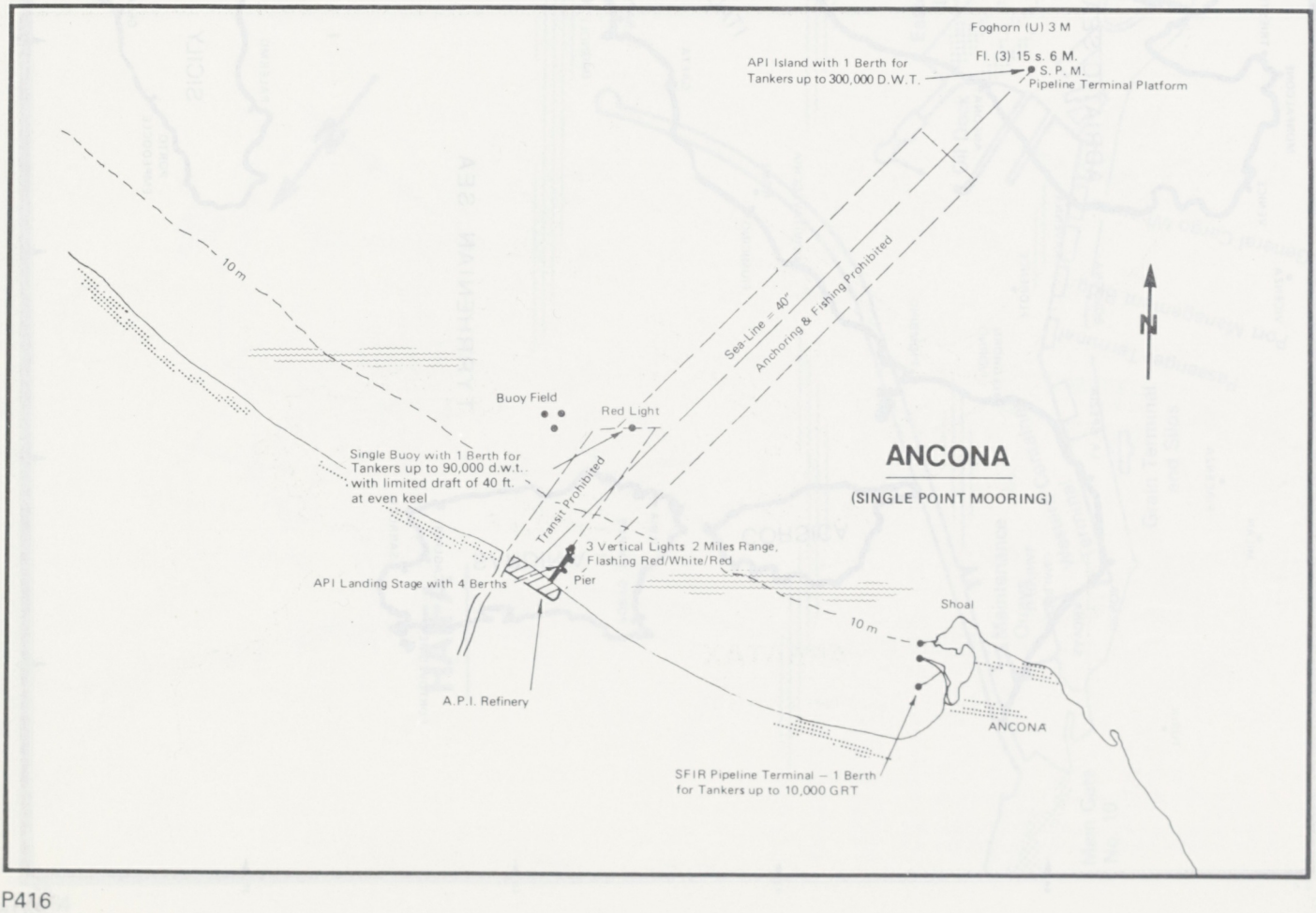
GIBRALTAR AT 15 KNOTS TO:	DISTANCE IN MILES	DURATION IN DAYS/HOURS
ALEXANDRIA	1798	5
ALGIERS	412	1^{3}
AUGUSTA	1035	2^{21}
BANIAS	2017	5^{15}
BARCELONA	515	1^{10}
BENGHAZI	1333	3^{17}
BEYROUTH	2005	5^{14}
BOUGIE (BEJAIA)	515	1^{10}
CARTHAGENA	237	0^{16}
CONSTANZA	1995	5^{13}
GENOA	847	2^{8}
ISTANBUL	1800	5
MALTA	985	2^{18}
MARSEILLES	690	1^{22}
NAPLES	980	2^{17}
NOVOROSSISK	2255	6^{6}
ORAN	235	0^{16}
RIJEKA	1608	4^{11}
SFAX	1005	2^{19}
SKARAMANGA	1490	4^{3}
TRIPOLI – LIBYA	1075	3
VENICE	1658	4^{15}

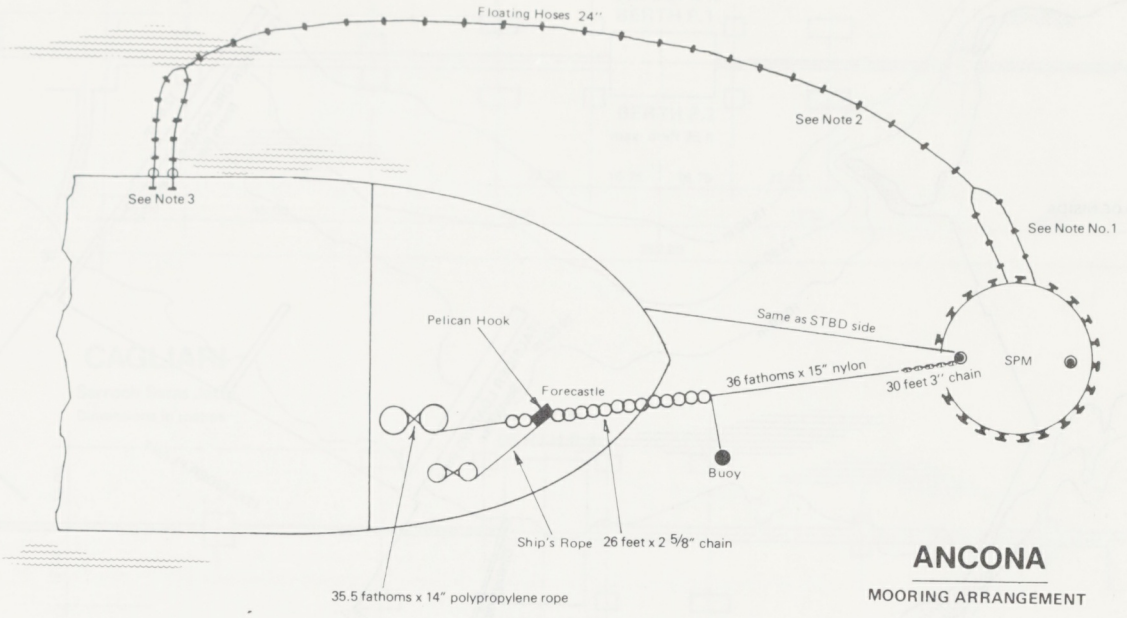
ADD ANY NEW PORTS.

P415

ITALY


ANCONA
Sanitary Station
Pilot Station
Cargo Area
Cargo Area
Shipyard
N. Breakwater
S. Breakwater
Maritime Station
- 9.5m
- 10.50m
- 12.00m
- 12.50m
- 8.00m
Silos
Silos
Silos
Container Area
New Container Area
SFIR Mooring
Landing Stage
Fishing Boats
N


Foghorn (U) 3 M
Fl. (3) 15 s. 6 M.
S. P. M.
Pipeline Terminal Platform
API Island with 1 Berth for
Tankers up to 300,000 D.W.T.
10 m
Sea-Line = 40"
Anchoring & Fishing Prohibited
N
Buoy Field
Red Light
Single Buoy with 1 Berth for
Tankers up to 90,000 d.w.t.
with limited draft of 40 ft.
at even keel
Transit Prohibited
ANCONA
(SINGLE POINT MOORING)
3 Vertical Lights 2 Miles Range,
Flashing Red/White/Red
API Landing Stage with 4 Berths
Pier
Shoal
10 m
A.P.I. Refinery
ANCONA
SFIR Pipeline Terminal – 1 Berth
for Tankers up to 10,000 GRT



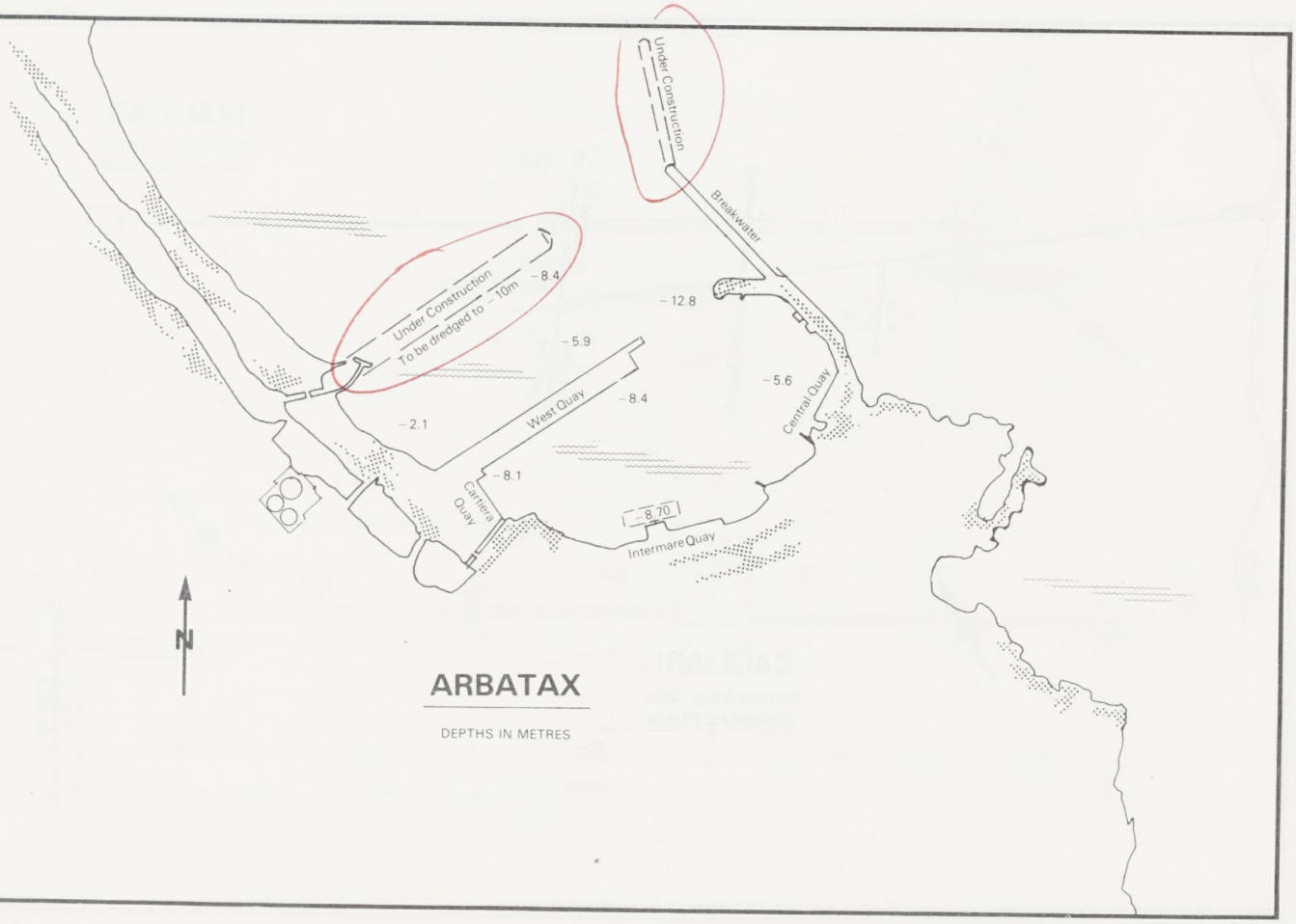
ANCONA

MOORING ARRANGEMENT

Note 1. 2 branches composed of 3 segments of floating hoses 24" each (Length 34m)

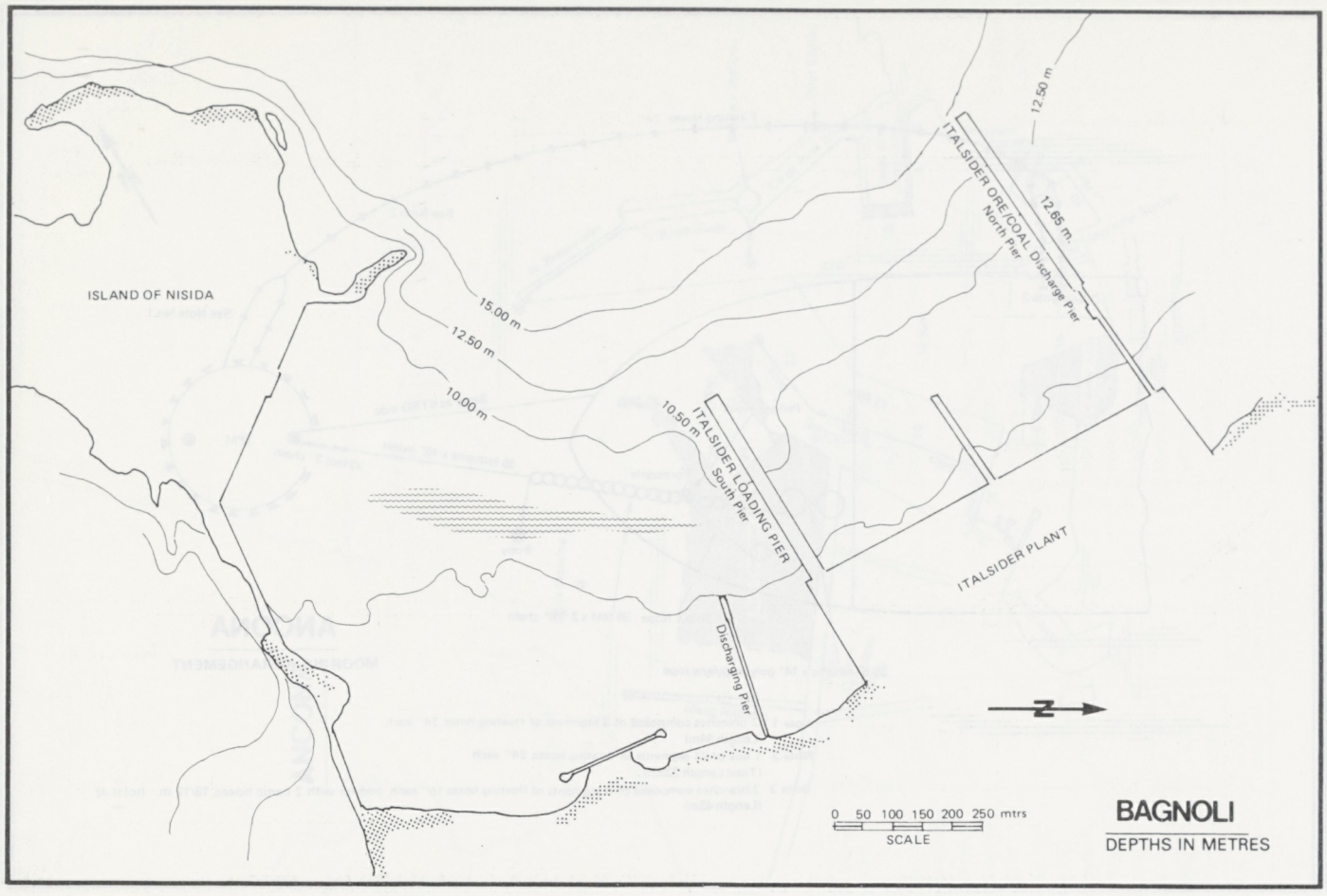
Note 2 1 line of 21 segments of floating hoses 24" each (Total Length 223m)

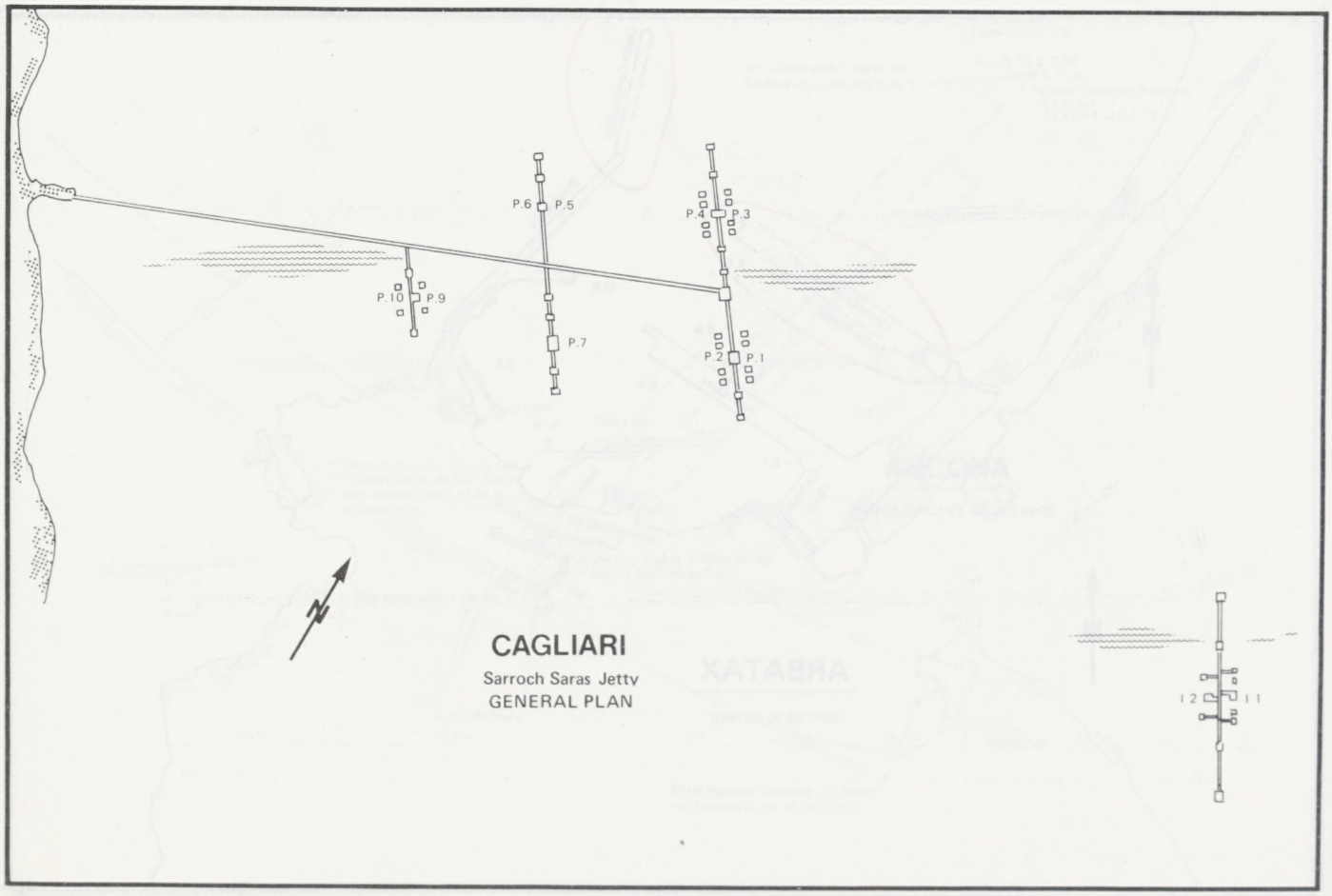
Note 3 2 branches composed of 4 segments of floating hoses 16" each ending with 2 conic hoses 16/12 in. (total 4) (Length 42m)

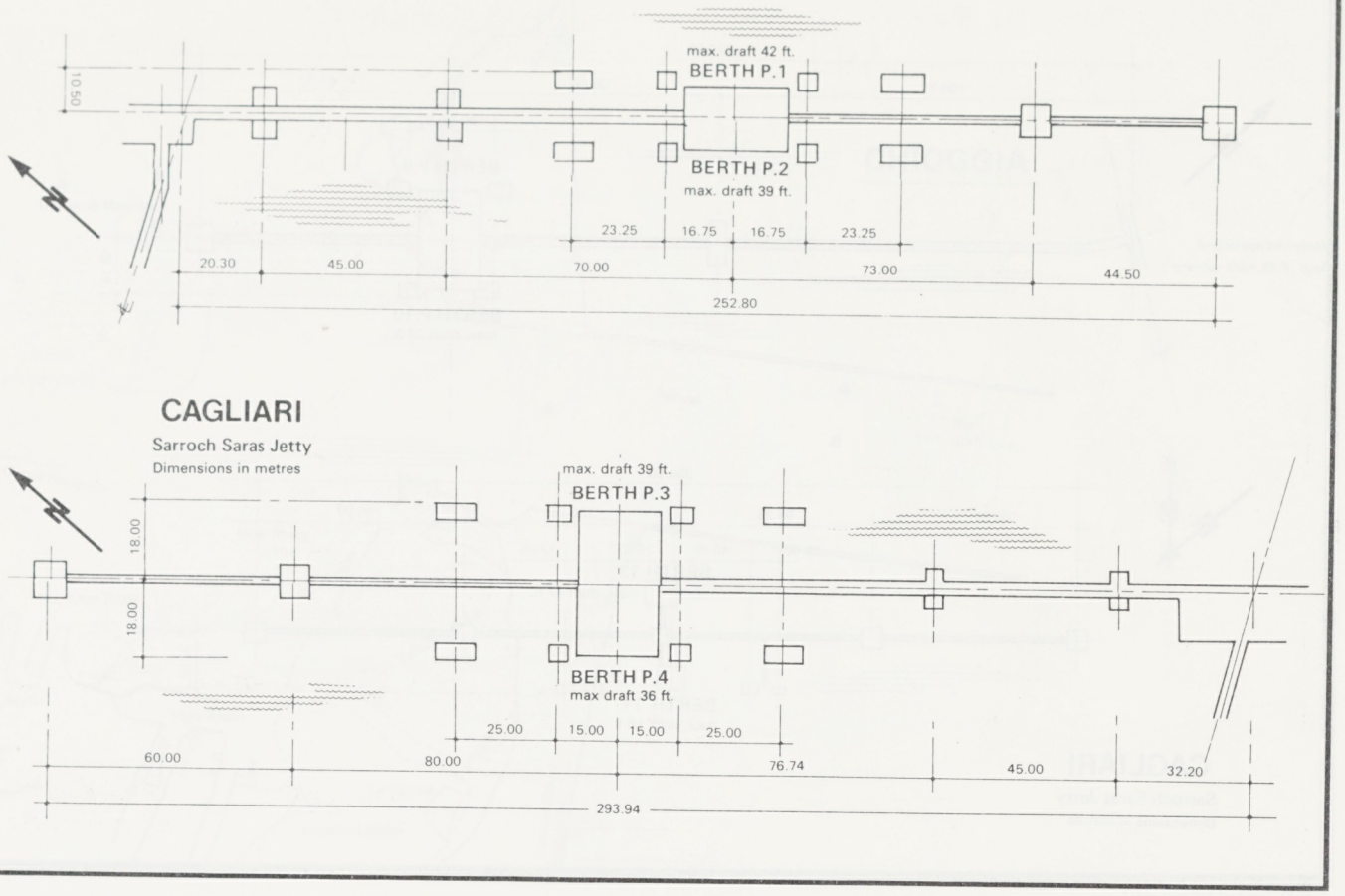


ARBATAX

DEPTHS IN METRES


ISLAND OF NISIDA
15.00 m
12.50 m
10.00 m
10.50 m
12.50 m
ITALSIDER ORE/COAL Discharge Pier
North Pier
12.85 m
ITALSIDER LOADING PIER
South Pier
ITALSIDER PLANT
Discharging Pier
N
0 50 100 150 200 250 mtrs
SCALE
BAGNOLI
DEPTHS IN METRES


P.6
P.5
P.4
P.3
P.10
P.9
P.7
P.2
P.1
N
CAGLIARI
Sarroch Saras Jetty
GENERAL PLAN
12
11



CAGLIARI

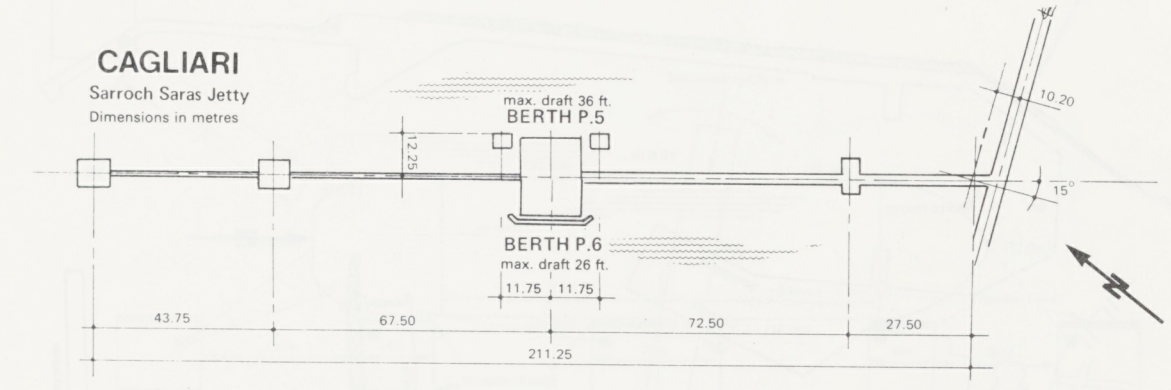
Sarroch Saras Jetty

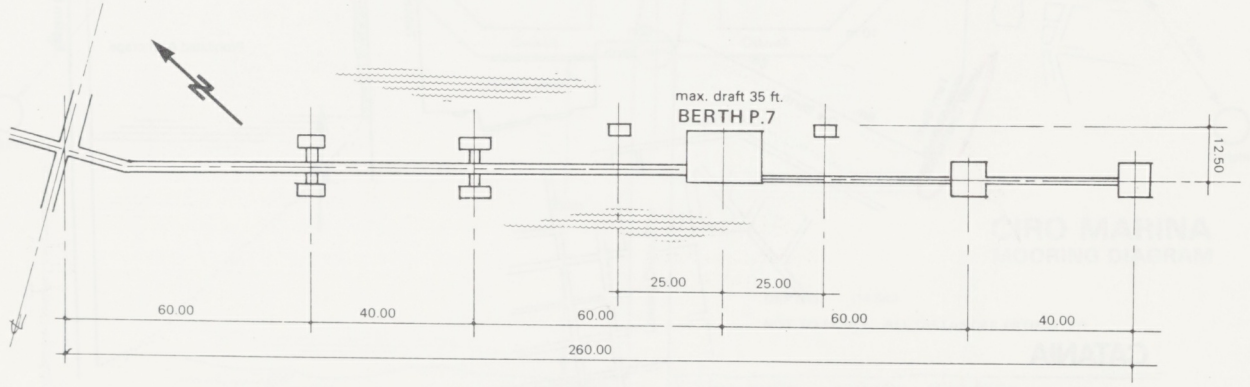
Dimensions in metres

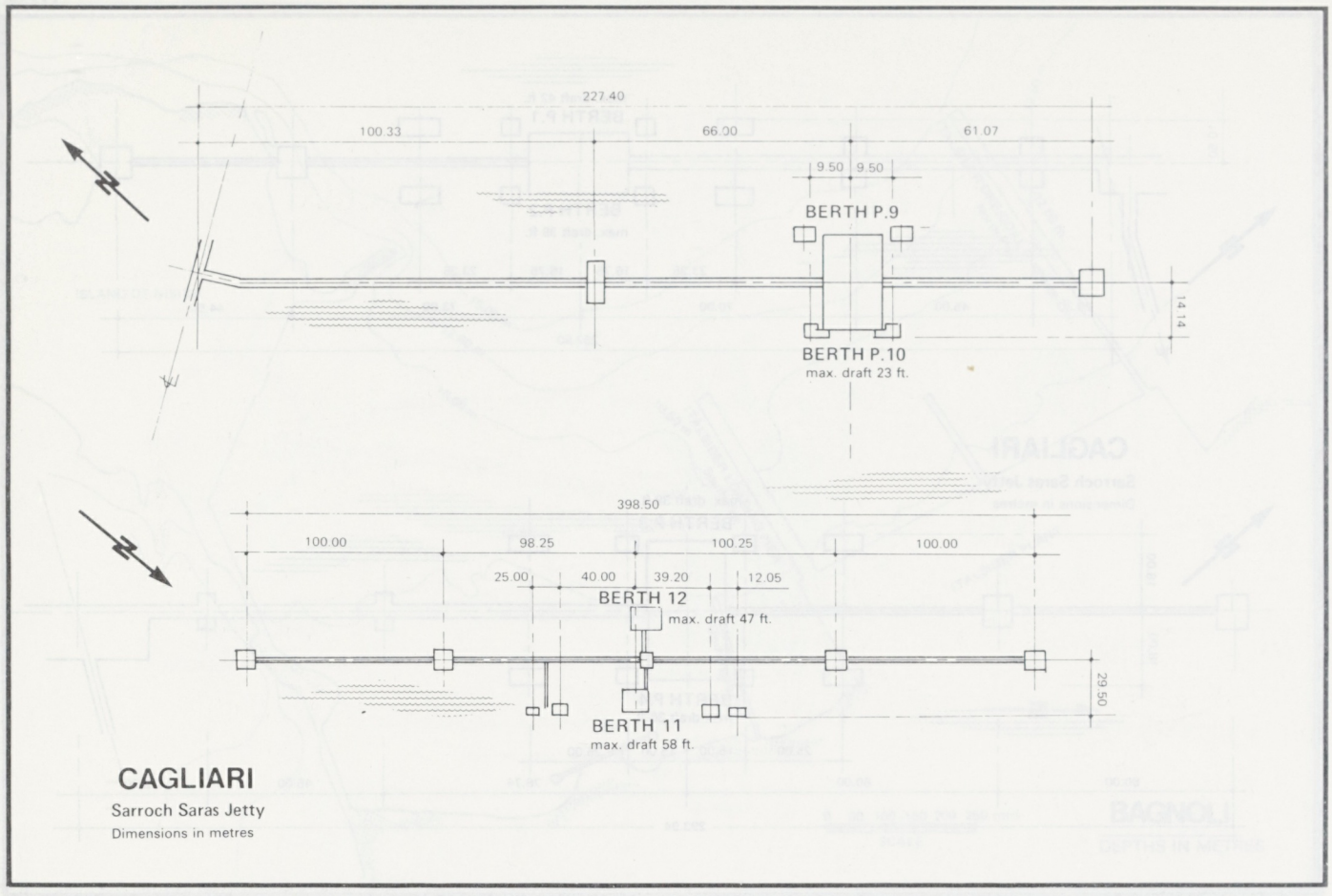
CAGLIARI

Sarroch Saras Jetty

Dimensions in metres



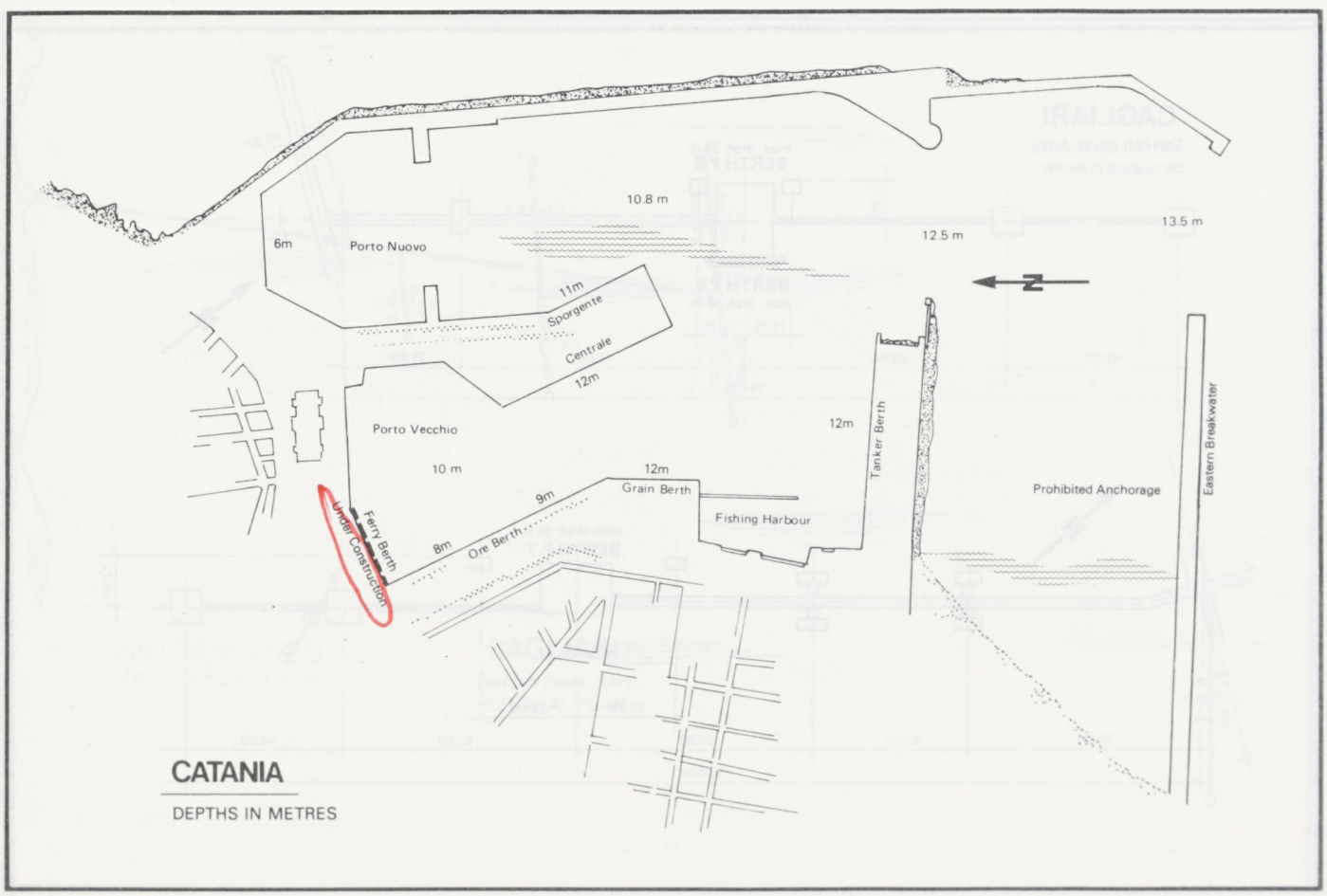




CAGLIARI

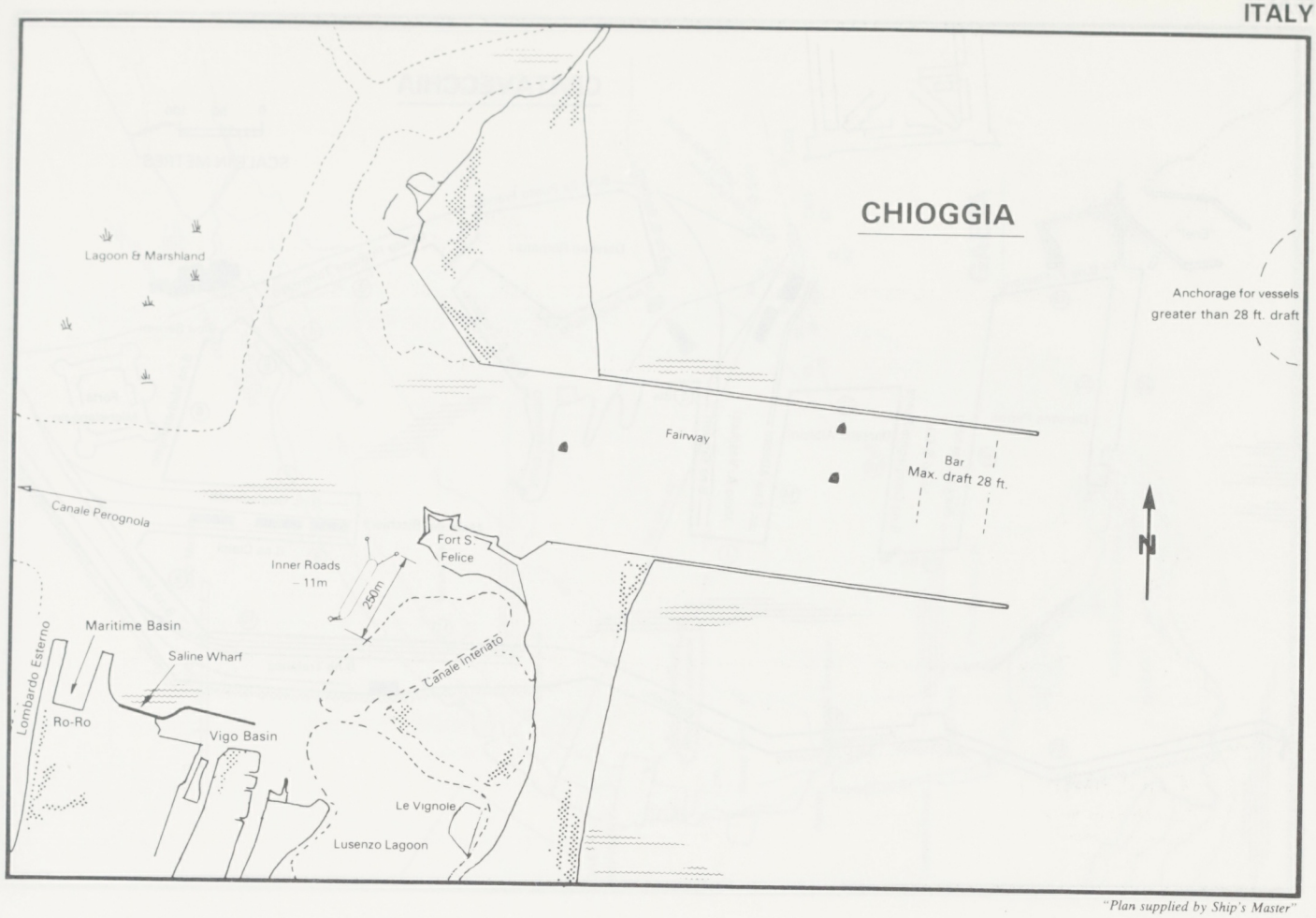
Sarroch Saras Jetty

Dimensions in metres

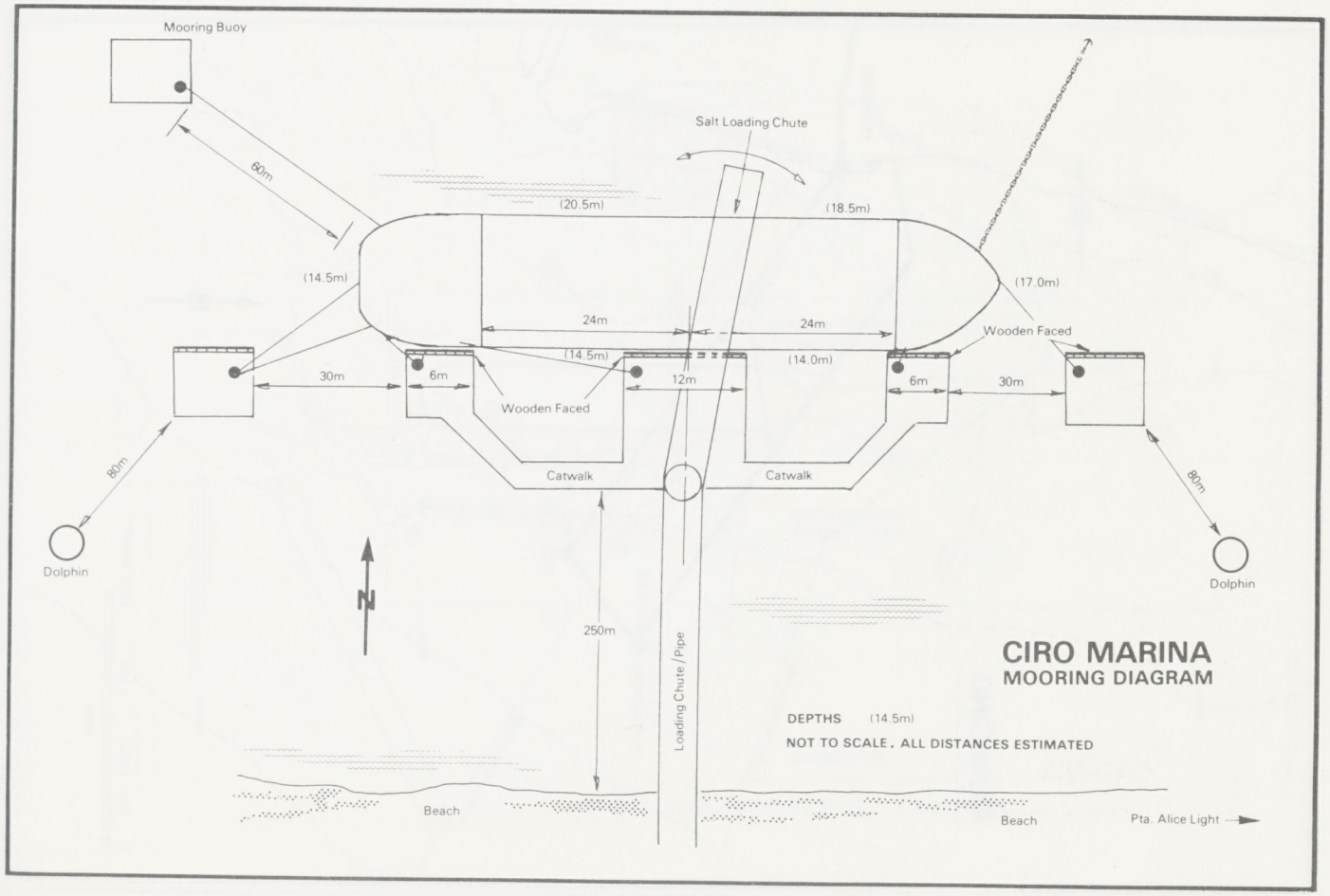


CATANIA

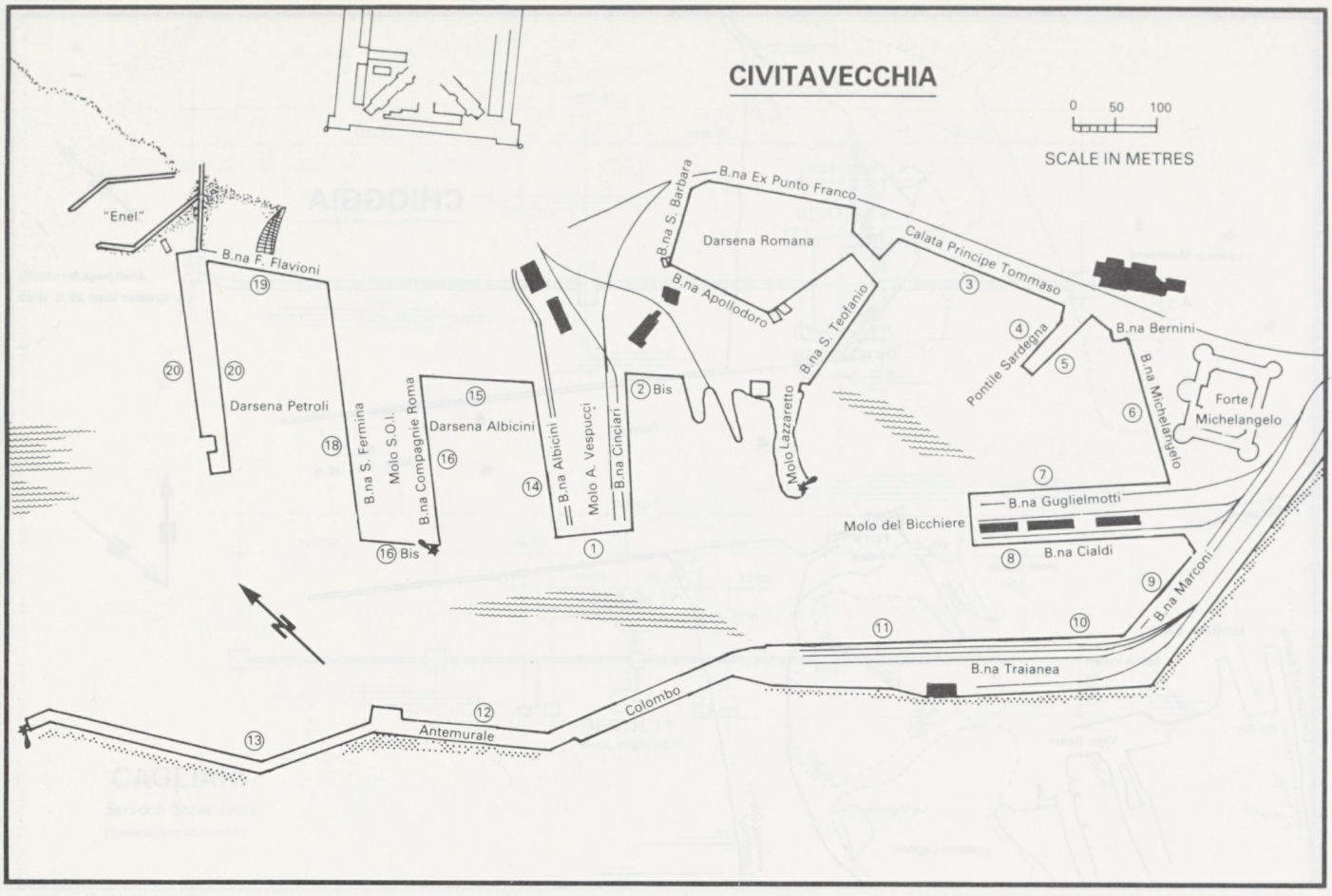
DEPTHS IN METRES

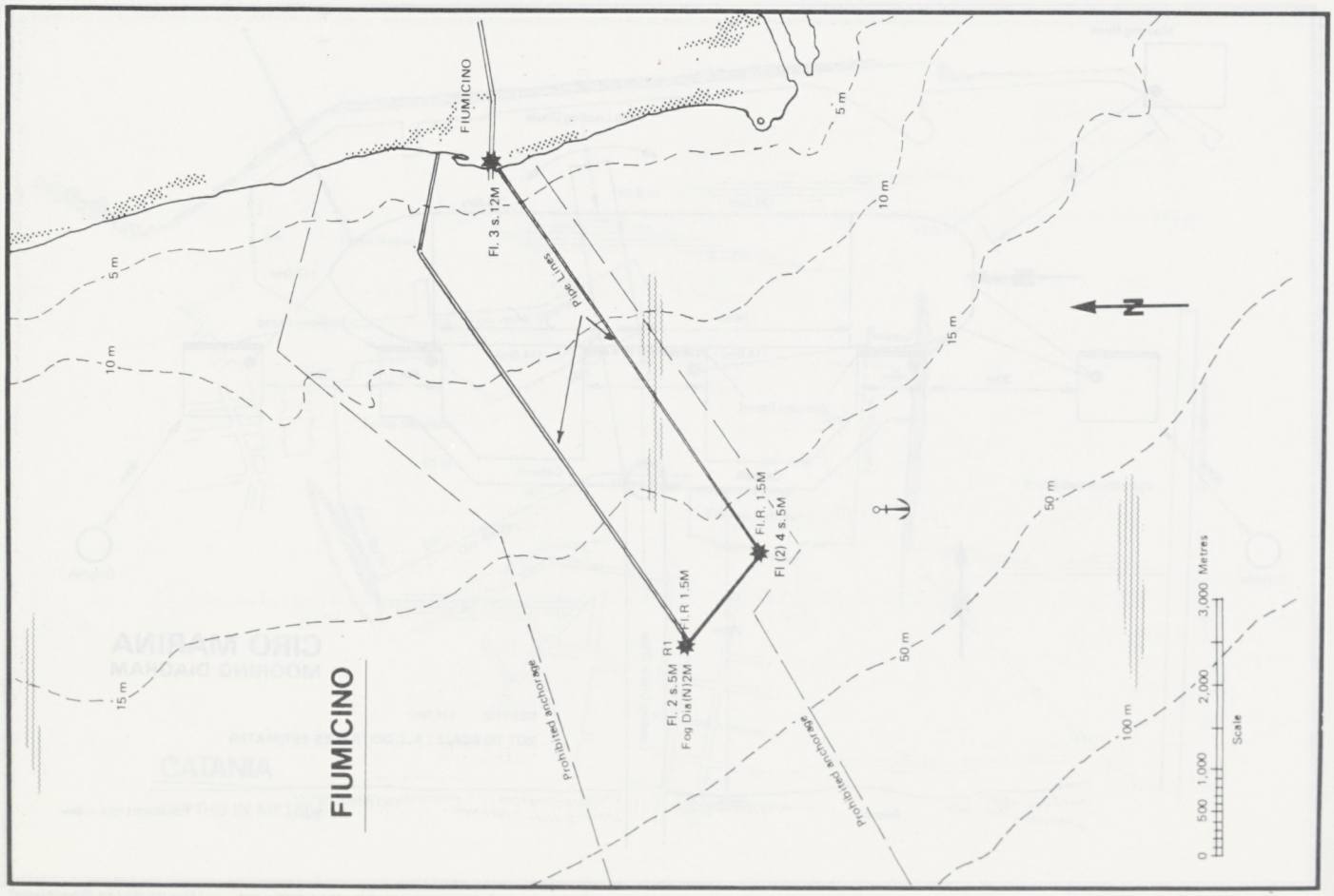


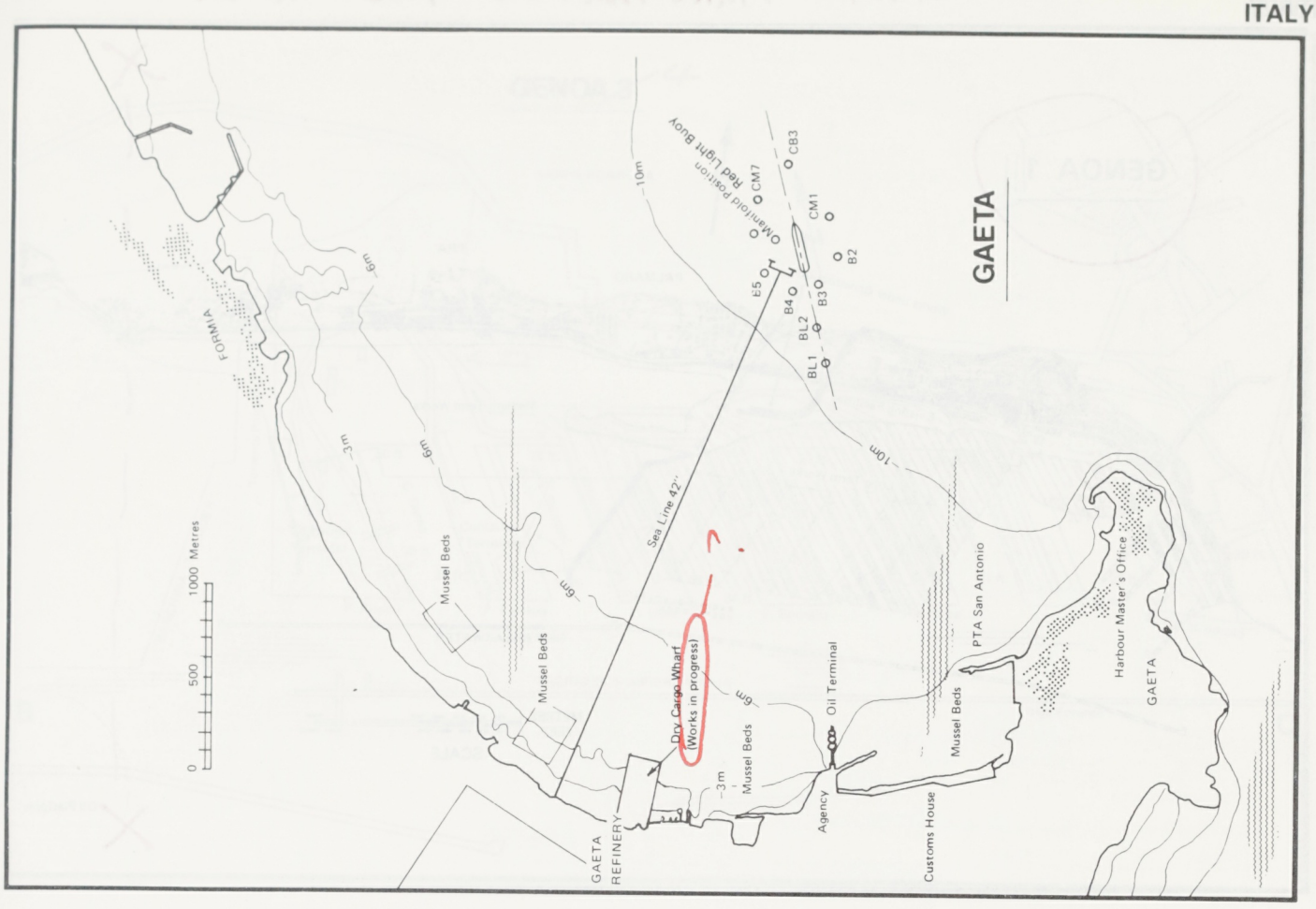
"Plan supplied by Ship's Master"

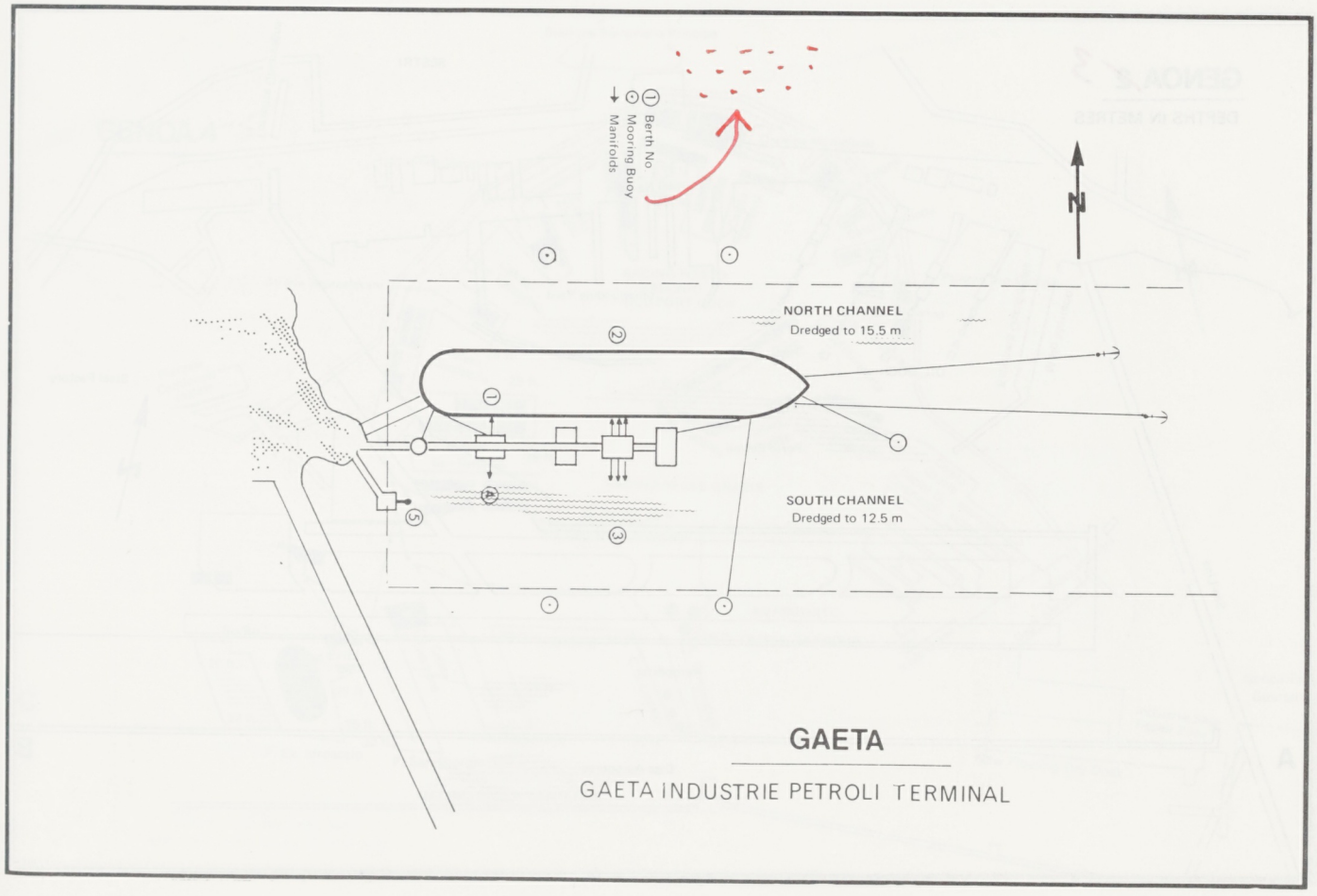


"Plan supplied by Ship's Master"


CIVITAVECCHIA
0 50 100
SCALE IN METRES
"Enel"
B.na F. Flavioni
Darsena Petroli
B.na S. Fermina
Molo S.O.I.
B.na Compagnie Roma
Darsena Albicini
B.na Albicini
Molo A. Vespucci
B.na Cinciari
B.na S. Barbara
B.na Ex Punto Franco
Darsena Romana
Calata Principe Tommaso
B.na Apollodoro
B.na S. Teofanio
Molo Lazzaretto
Pontile Sardegna
B.na Bernini
B.na Michelangelo
Forte Michelangelo
B.na Guglielmotti
Molo del Bicchiere
B.na Cialdi
B.na Marconi
B.na Traianea
Colombo
Antemurale


FIUMICINO
Fl. 3 s.12M
Pipe Lines
Fl.R. 1.5M
Fl (2) 4 s.5M
Fl.R 1.5M
R1
Fl. 2 s.5M
Fog Dia(N)2M
Prohibited anchorage
Prohibited anchorage
5 m
10 m
15 m
50 m
100 m
3,000 Metres
2,000
1,000
500
0
Scale

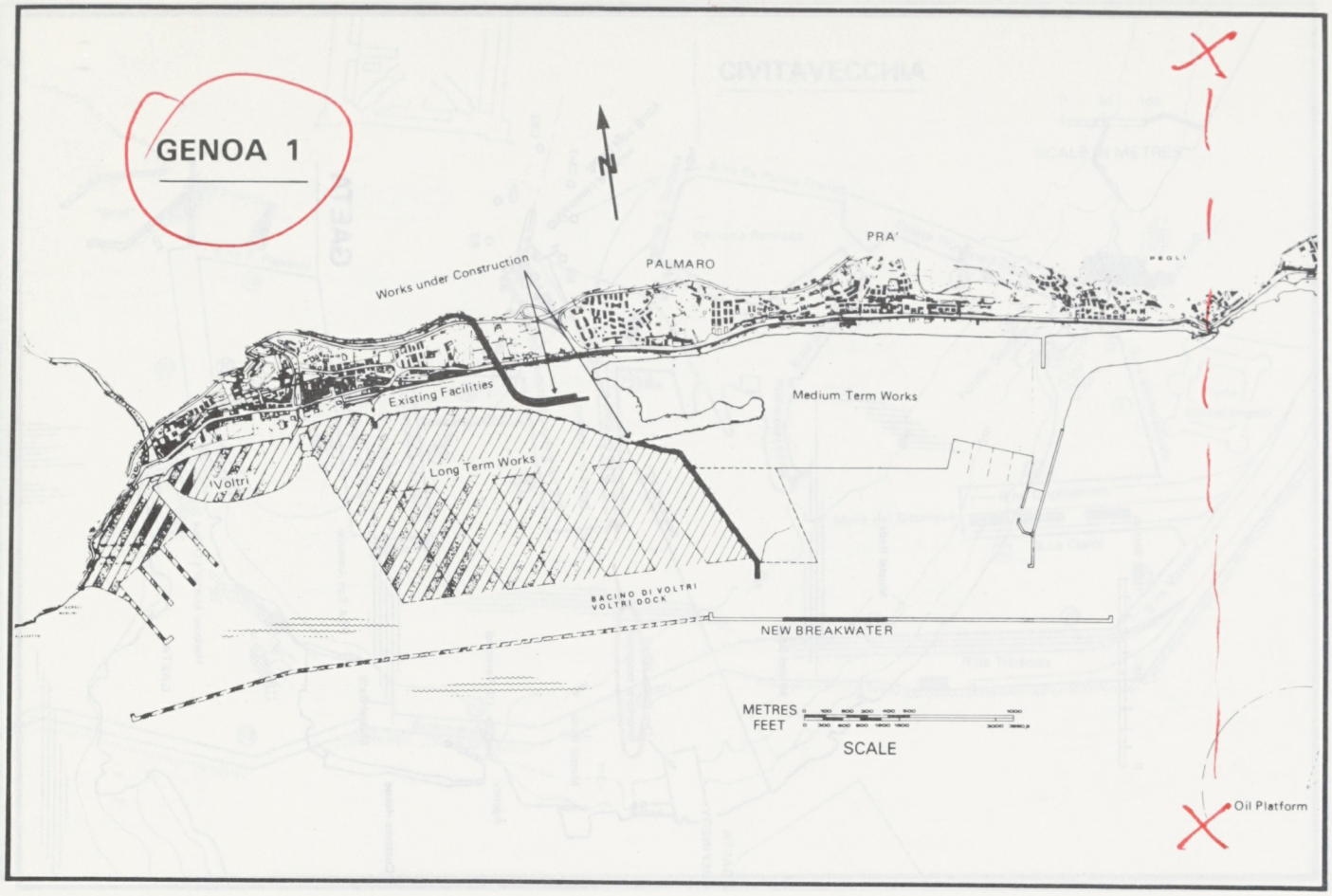


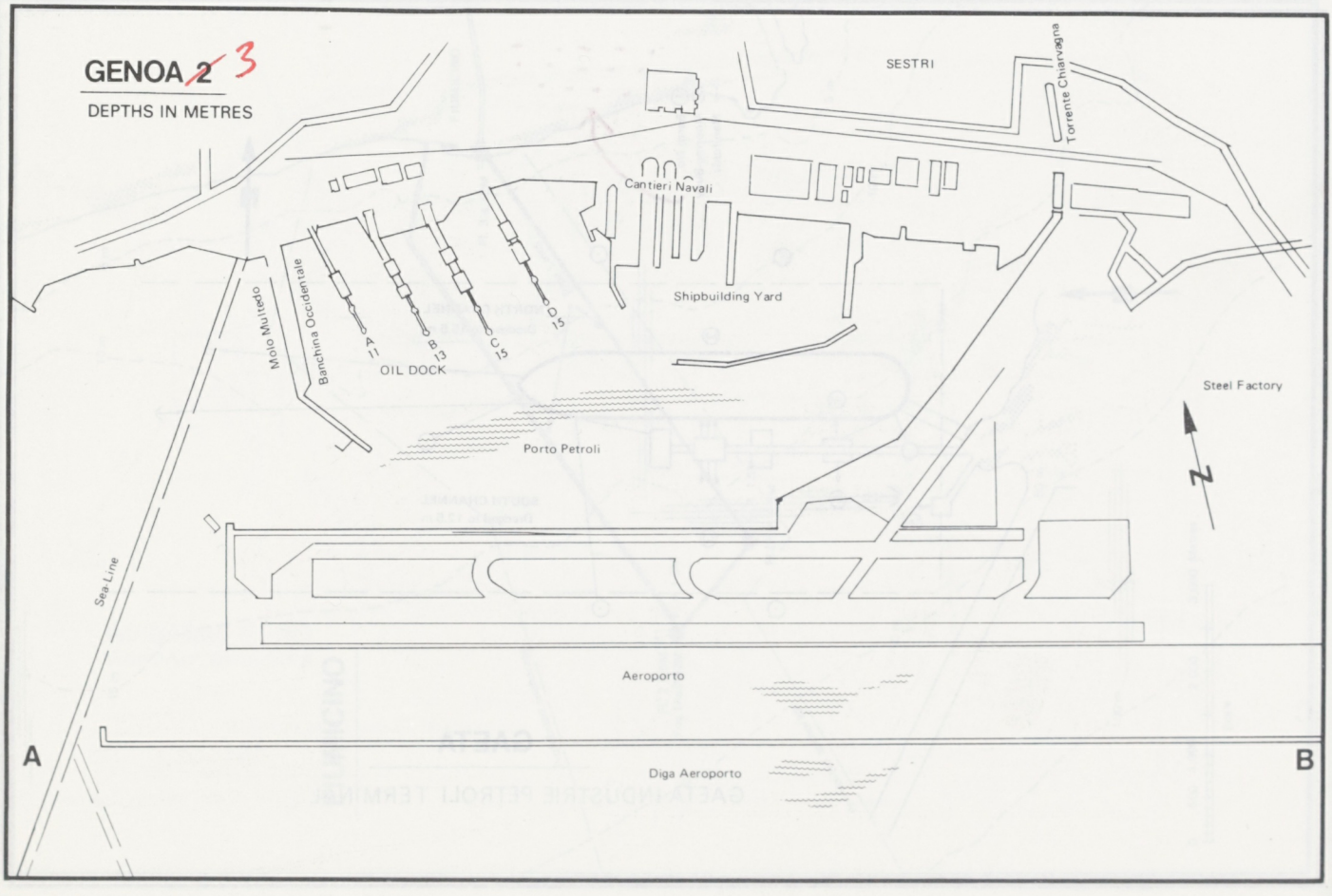


GAETA

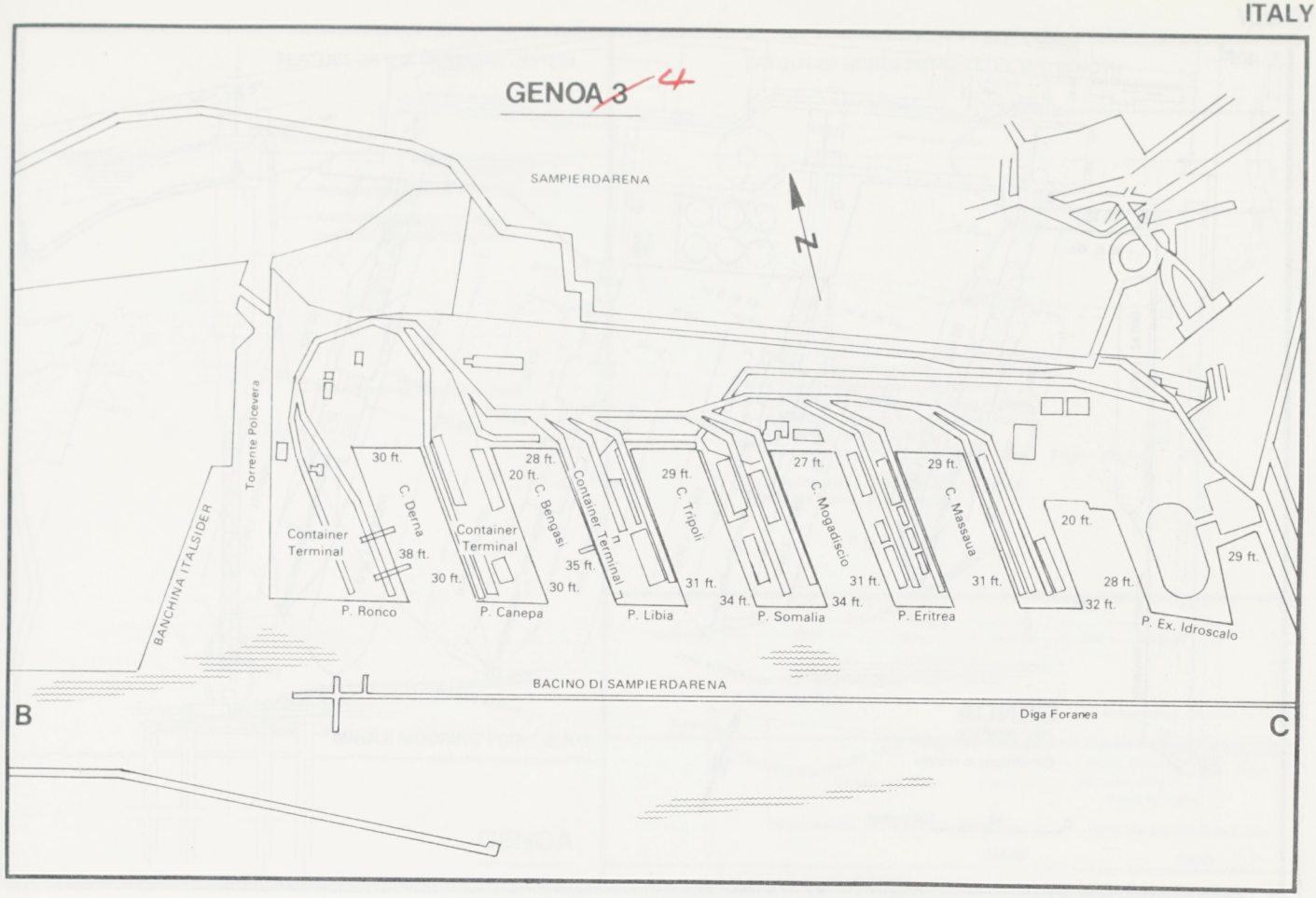
GAETA INDUSTRIE PETROLI TERMINAL

LINDA = MAKE PLAN ON P426 - No. 2.

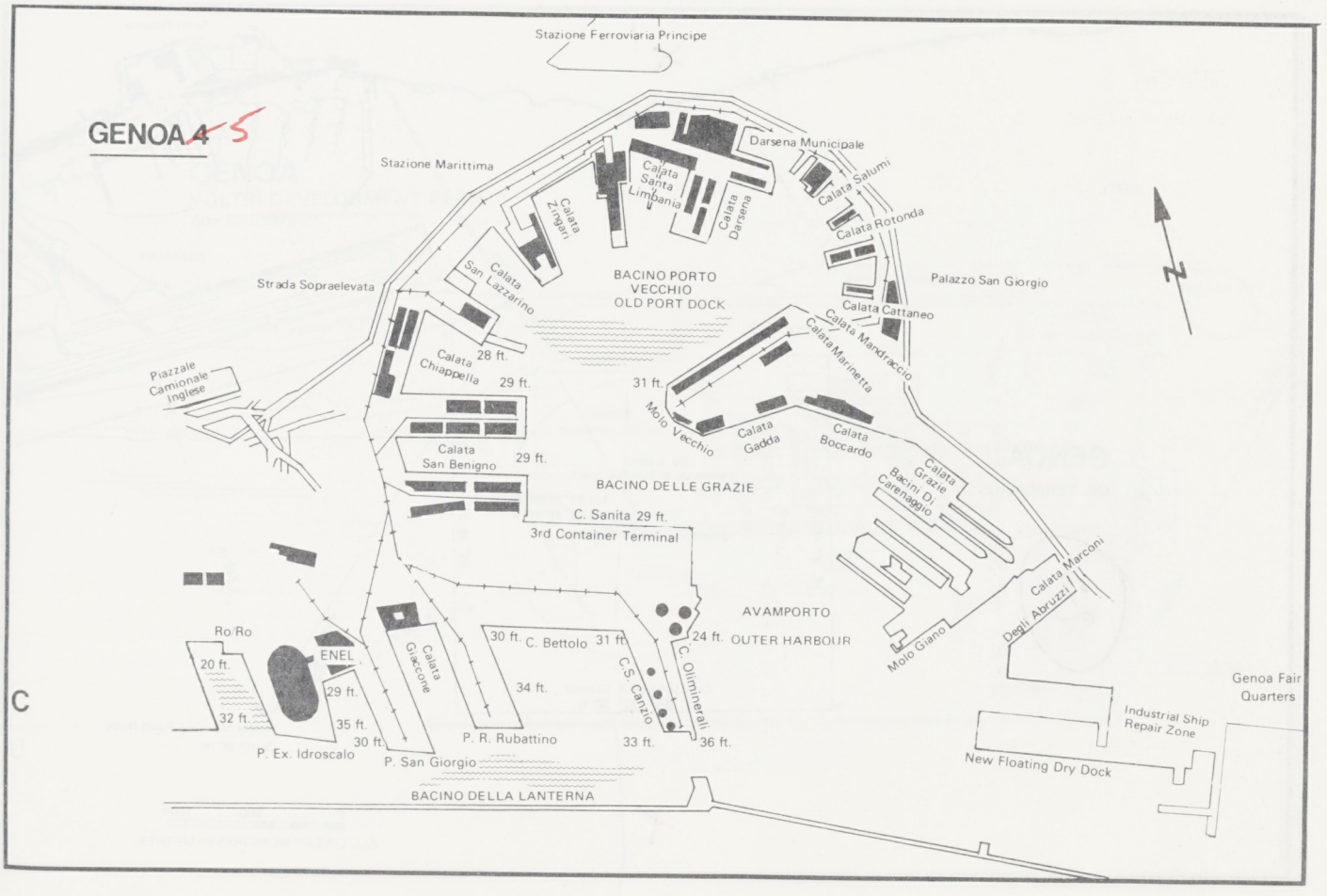


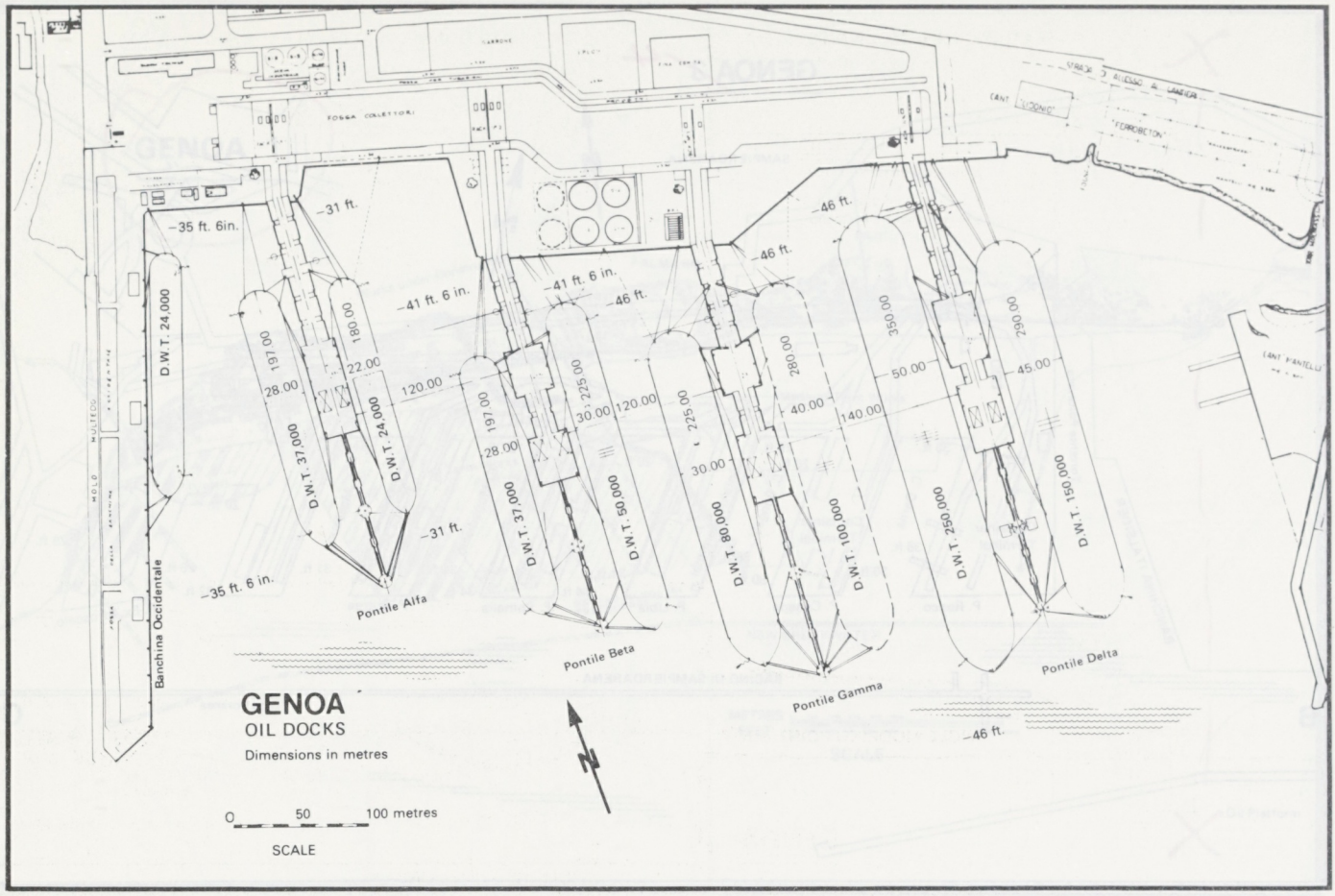


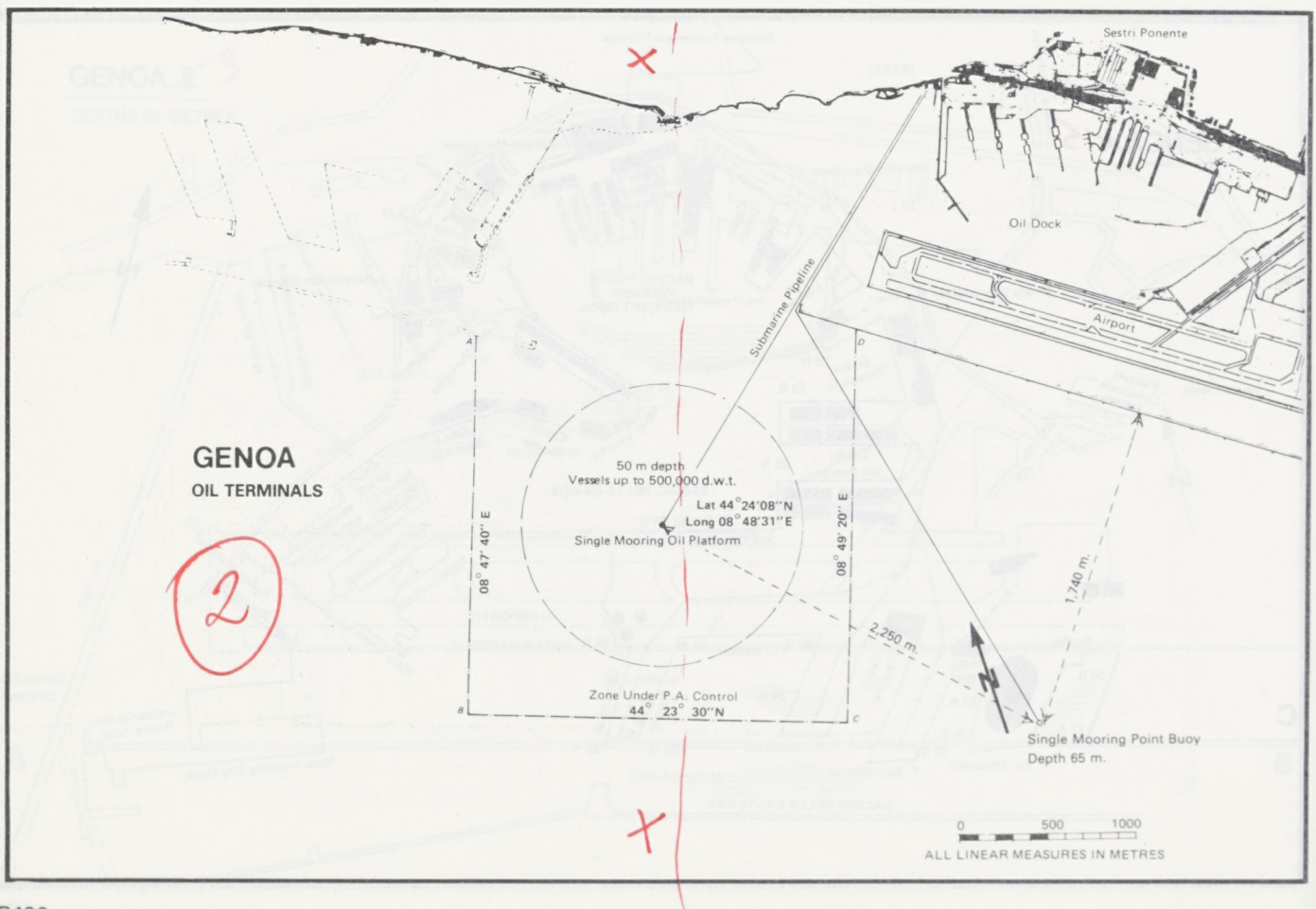
GENOA 3 4



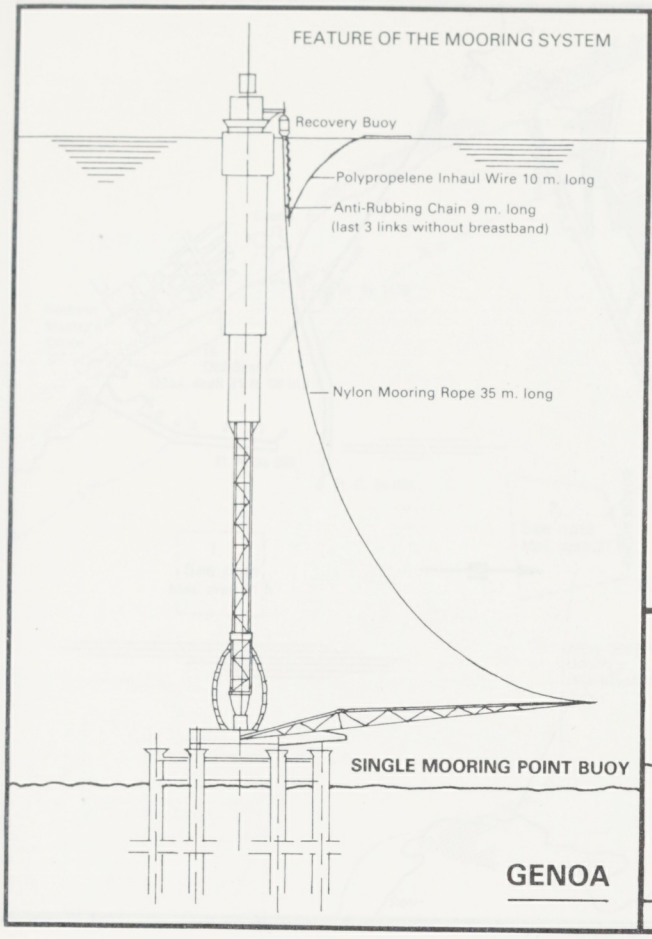
GENOA 4 5




GENOA
OIL DOCKS
Dimensions in metres
0 50 100 metres
SCALE
N
Banchina Occidentale
Pontile Alfa
Pontile Beta
Pontile Gamma
Pontile Delta
D.W.T. 24,000
D.W.T. 37,000
D.W.T. 24,000
D.W.T. 37,000
D.W.T. 50,000
D.W.T. 80,000
D.W.T. 100,000
D.W.T. 250,000
D.W.T. 150,000
-35 ft. 6in.
-31 ft.
-41 ft. 6 in.
-46 ft.
-35 ft. 6 in.
-31 ft.
-41 ft. 6 in.
-46 ft.
-46 ft.
-46 ft.
-46 ft.
197.00
28.00
180.00
22.00
120.00
197.00
28.00
225.00
30.00
120.00
225.00
30.00
280.00
40.00
140.00
350.00
50.00
290.00
45.00

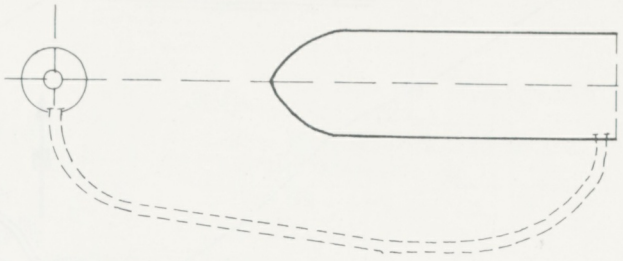

GENOA
OIL TERMINALS
2
Sestri Ponente
Oil Dock
Airport
Submarine Pipeline
50 m depth
Vessels up to 500,000 d.w.t.
Lat 44°24'08"N
Long 08°48'31"E
Single Mooring Oil Platform
08° 47' 40" E
08° 49' 20" E
2,250 m.
1,740 m.
Zone Under P.A. Control
44° 23° 30"N
Single Mooring Point Buoy
Depth 65 m.
N
0 500 1000
ALL LINEAR MEASURES IN METRES

FEATURE OF THE MOORING SYSTEM



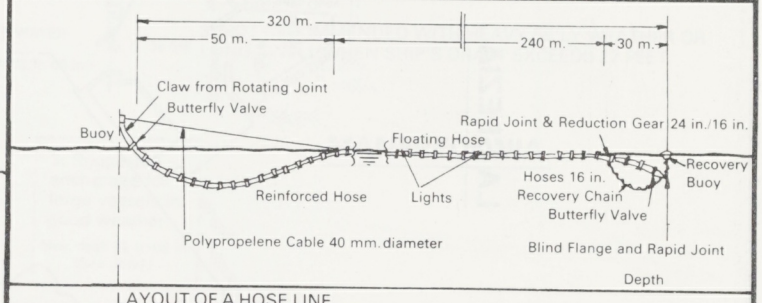
GENOA

LAYOUT OF HOSES DISPOSITION AND LENGTH



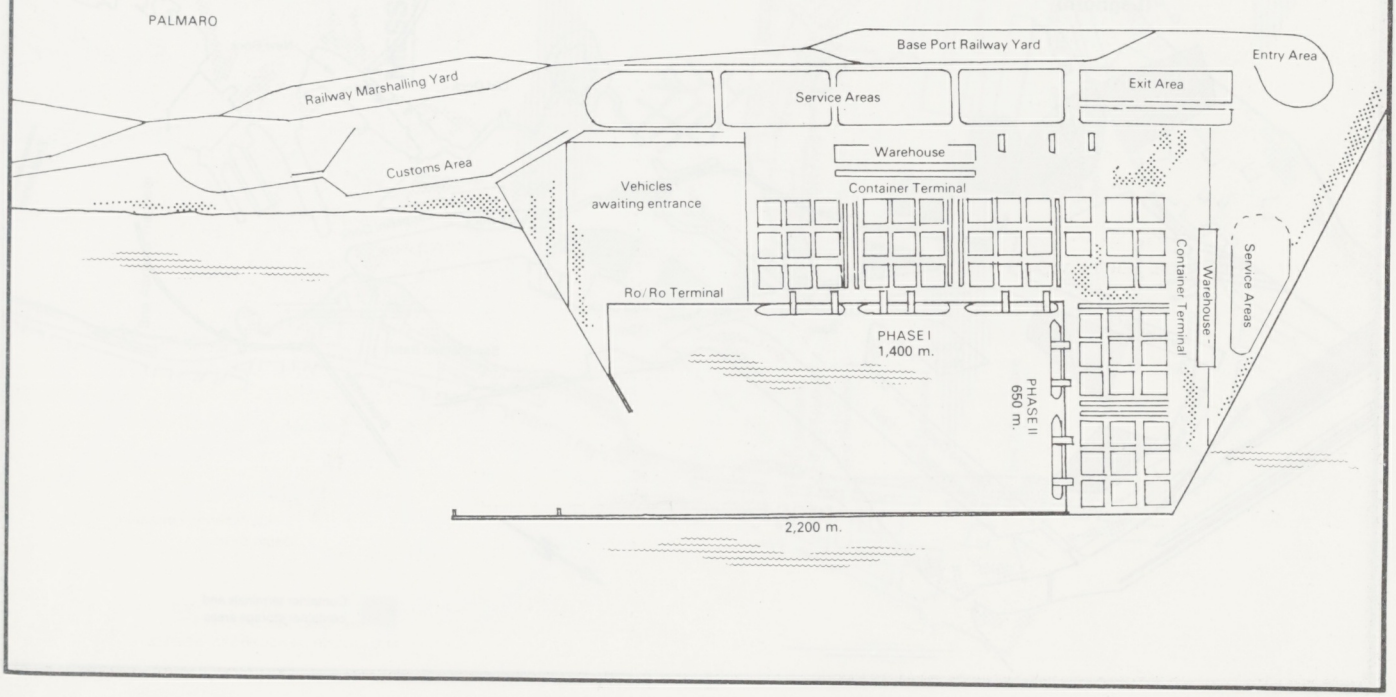
A = Buoy Distance/Sea-Test with Full Charge = 111 m.
A1 = Buoy Distance/Sea-Test in Ballast = 103 m.
B = Test Manifold Distance = 170 m.
C = Free Board with Ship in Ballast = 20 m.
D = Manifold Distance from Bulwarks = 5 m.
E = Manifold Height from Deck = 2 m.
F = 3 Times Ray Line Curving 16 in. = 7 m. Total = 325 m.

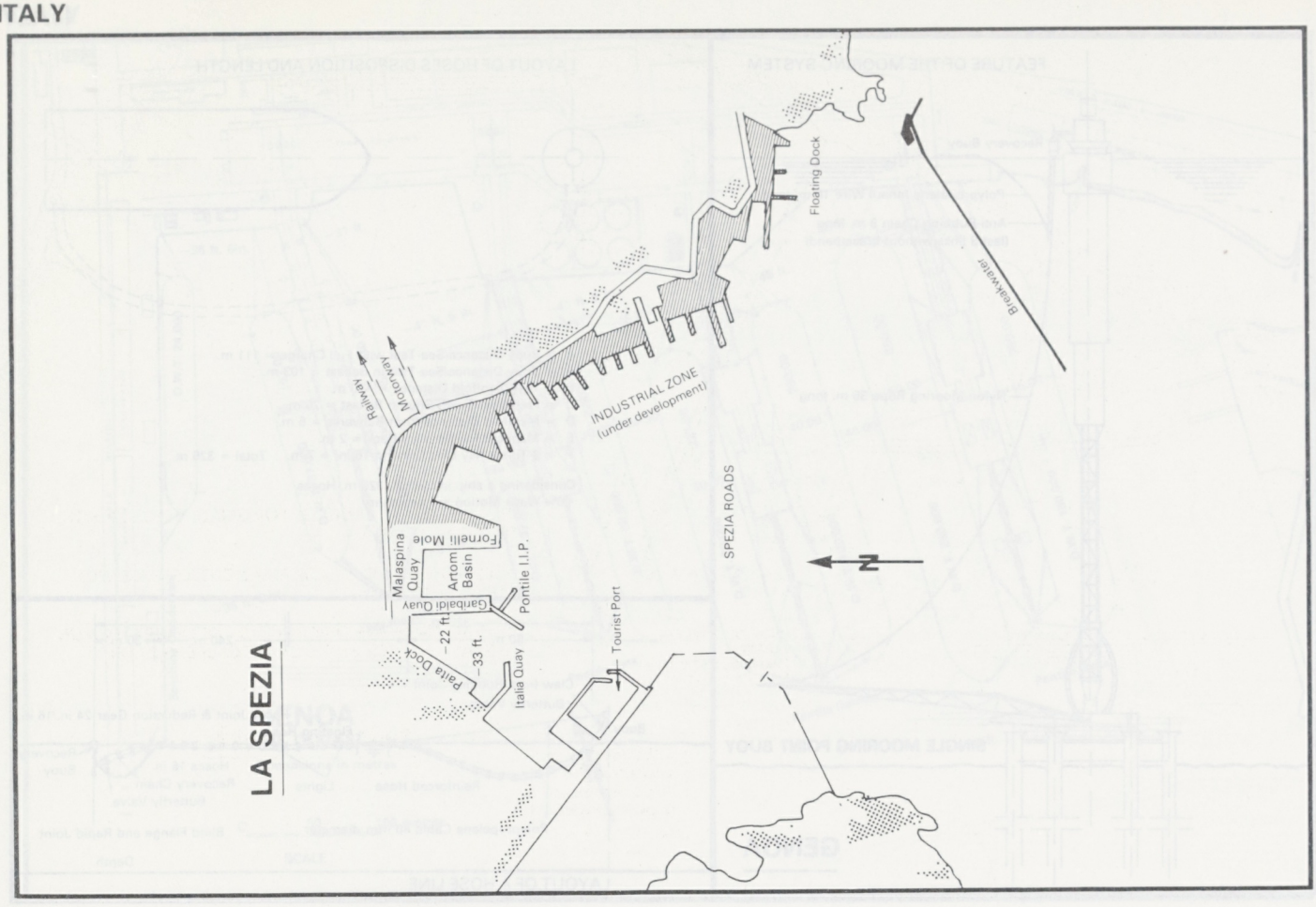
Considering a ship in Ballast, 325 m. Hoses
+6% Wave Motion are necessary

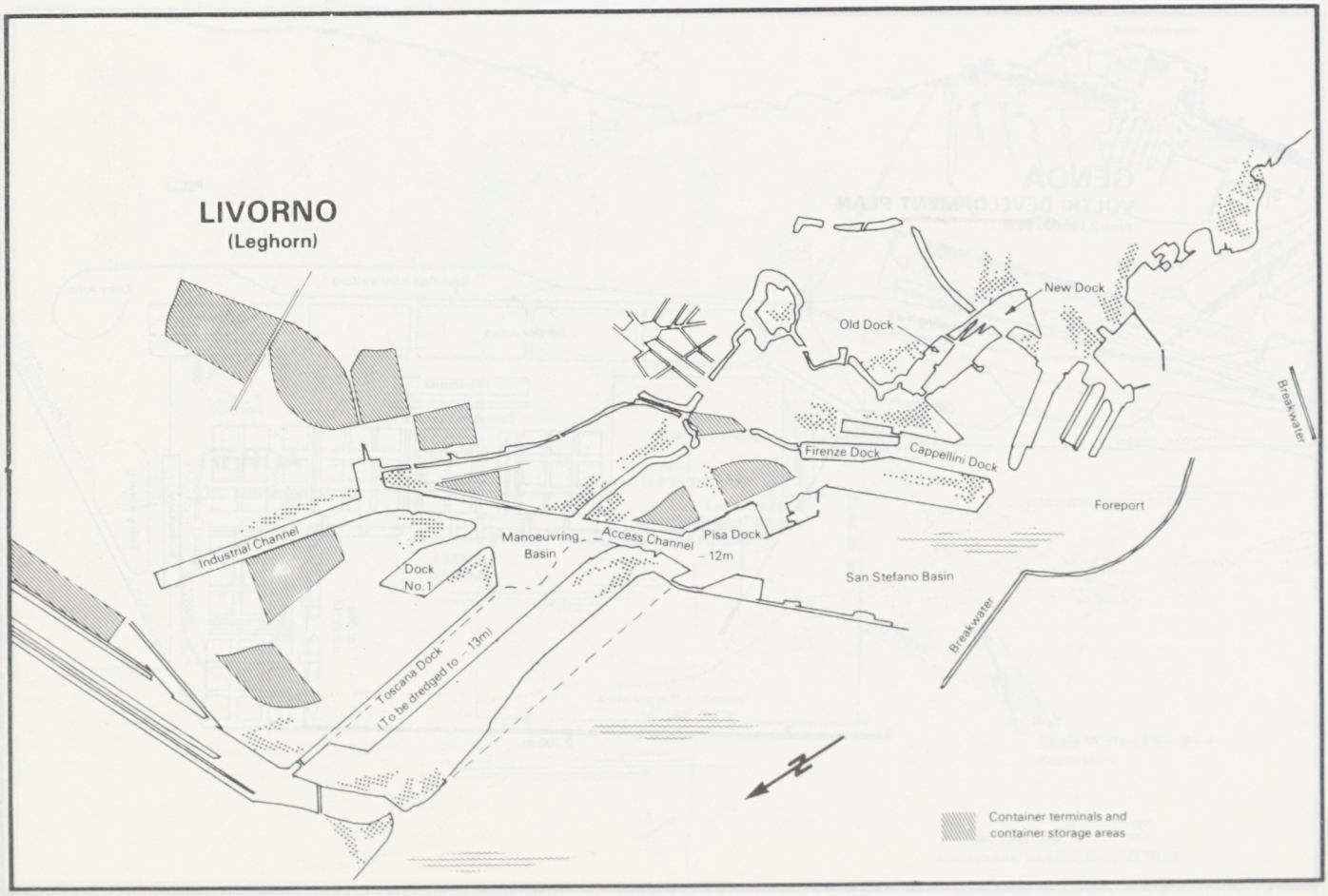


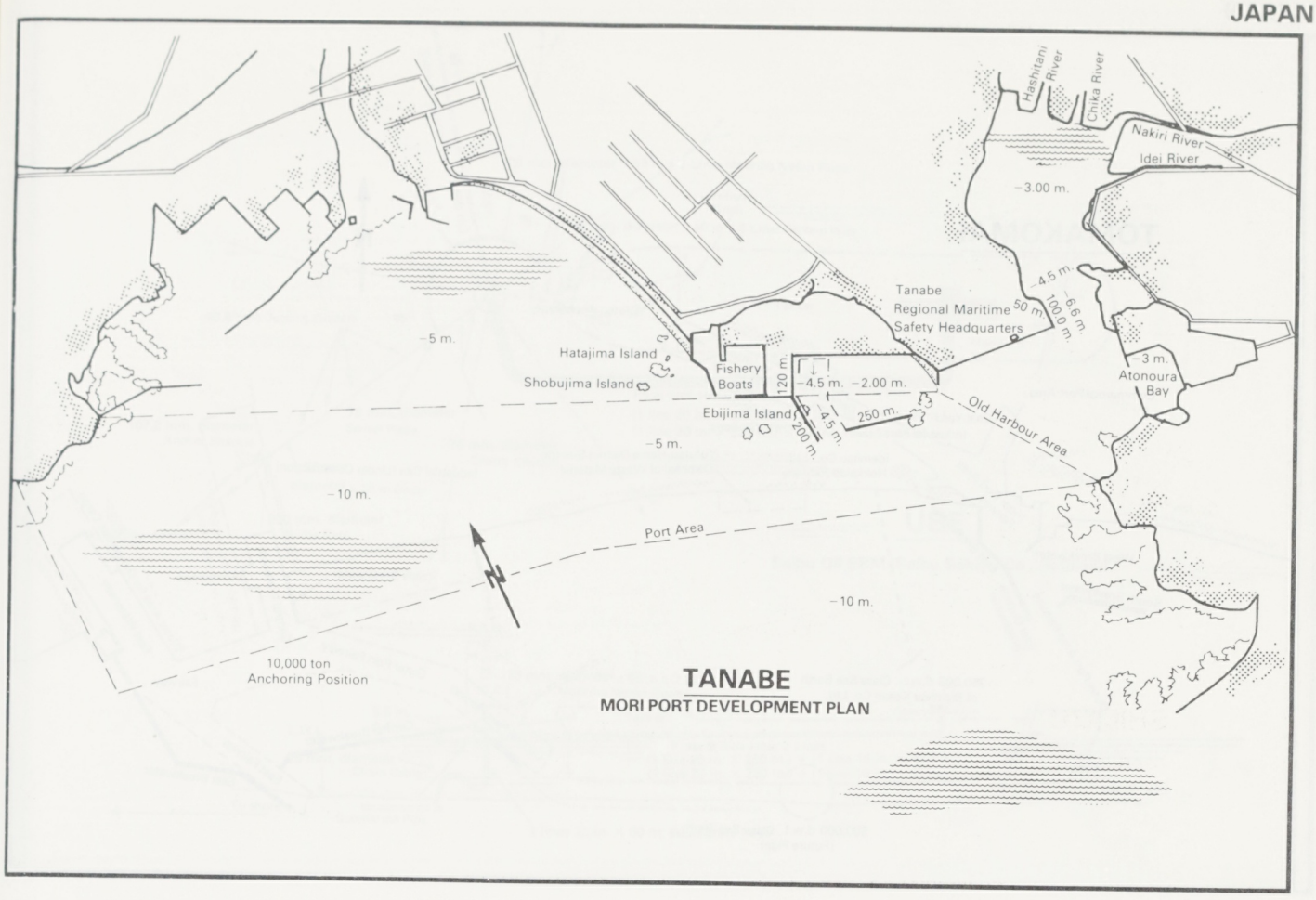
LAYOUT OF A HOSE LINE

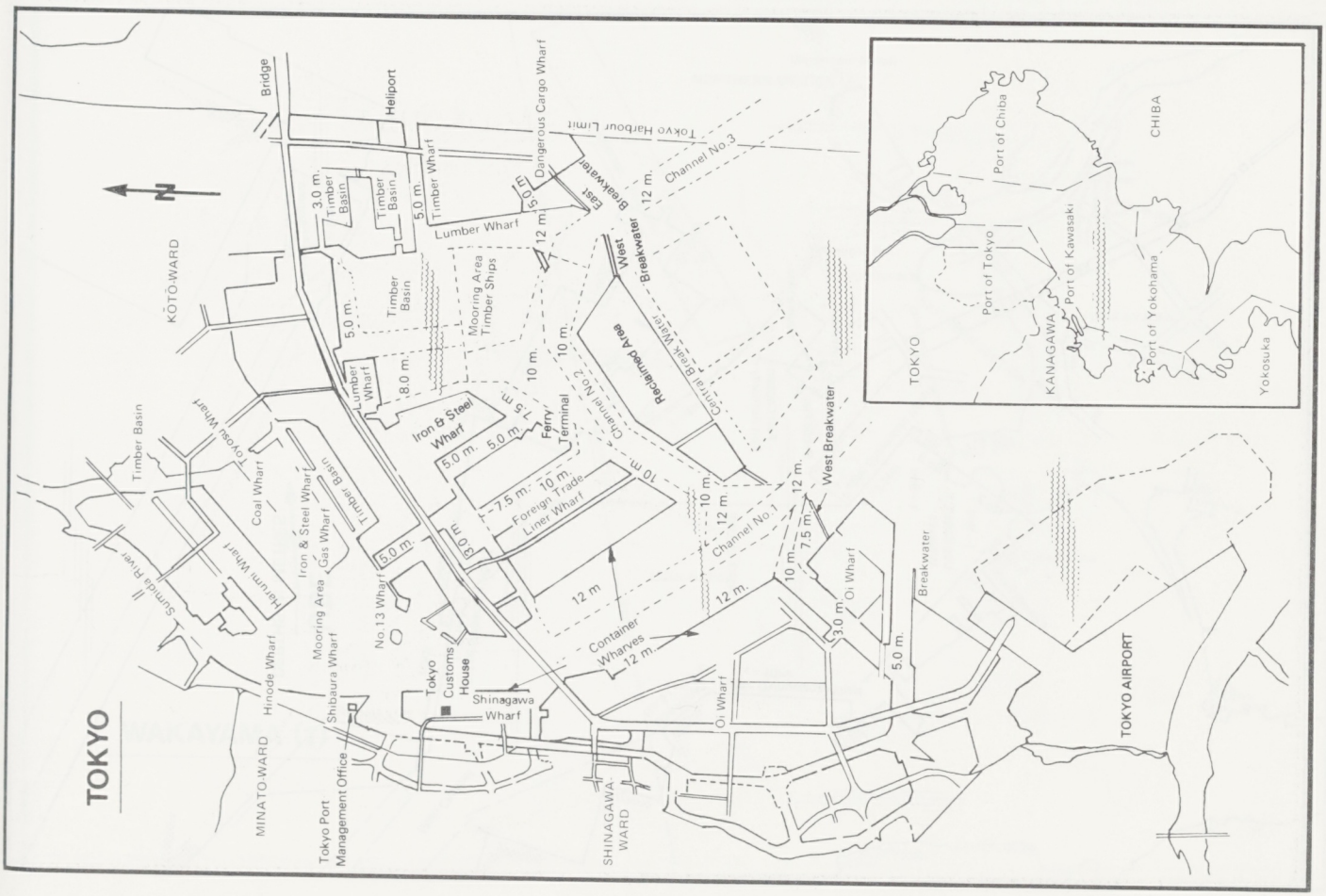
GENOA
VOLTRI DEVELOPMENT PLAN
Area 2,700,000 sq.m.

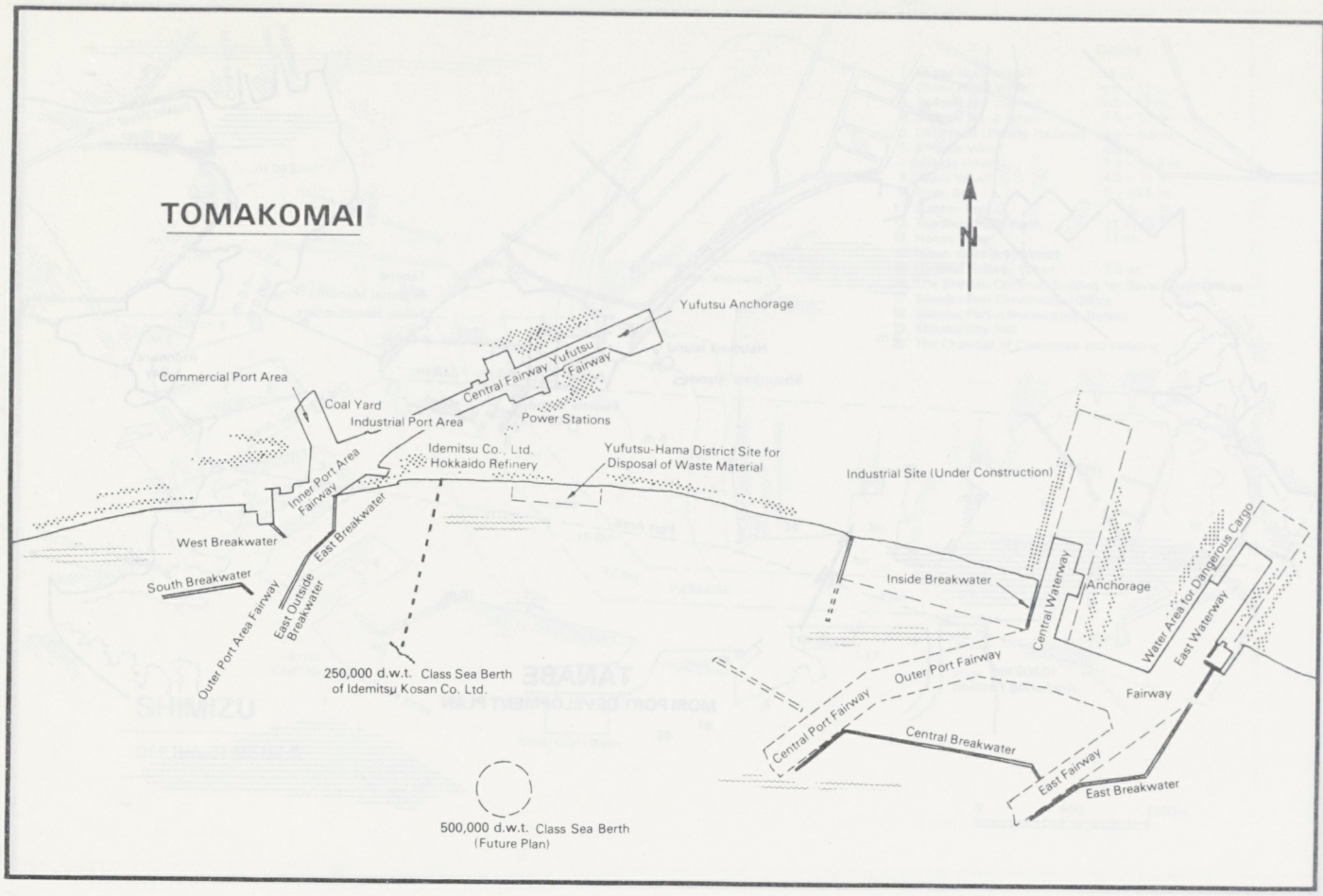


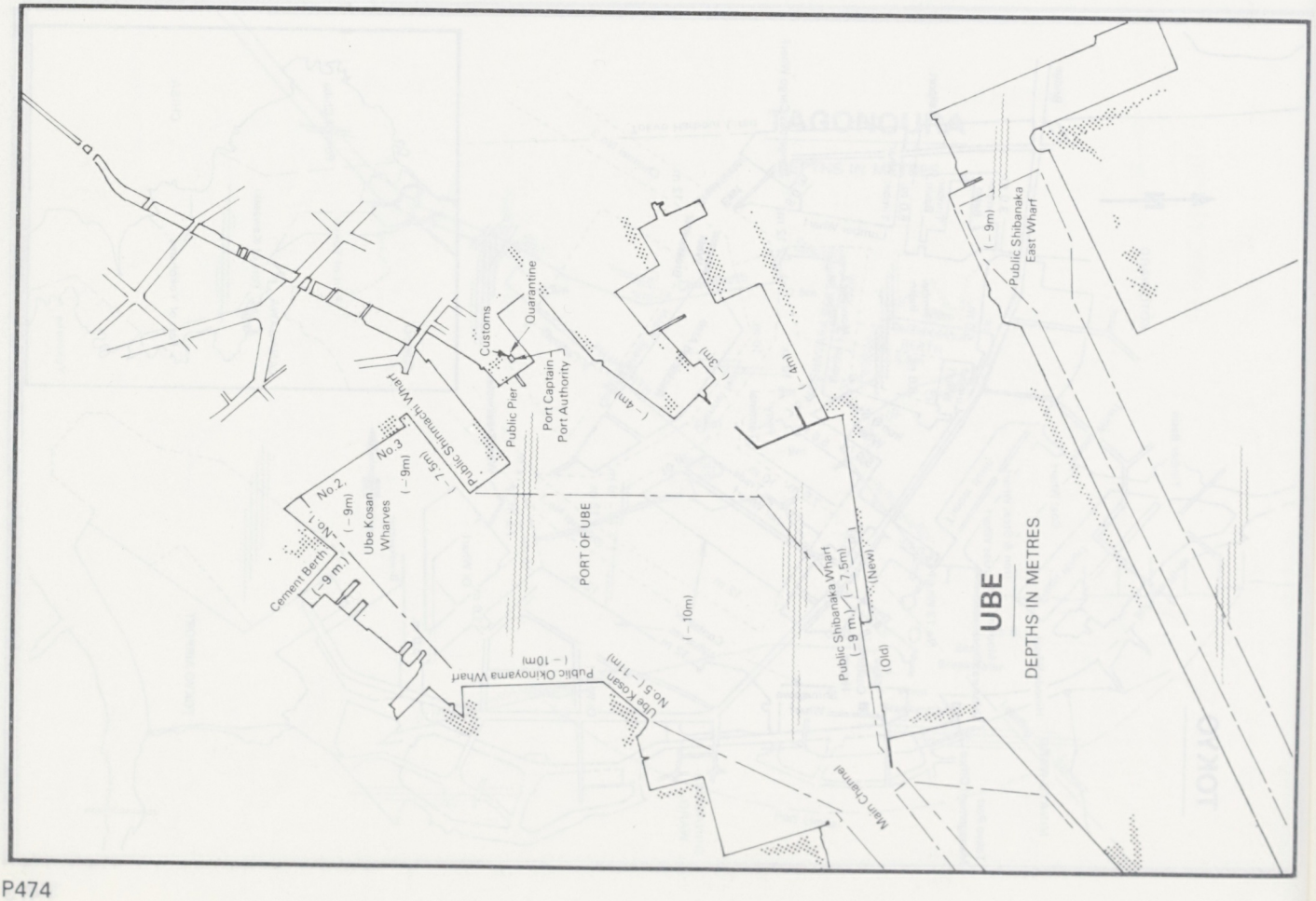

LA SPEZIA
Floating Dock
Breakwater
Railway
Motorway
INDUSTRIAL ZONE
(under development)
SPEZIA ROADS
Malaspina Quay
Artom Basin
Fornelli Mole
Garibaldi Quay
Pontile I.I.P.
– 22 ft.
– 33 ft.
Italia Quay
Tourist Port
N

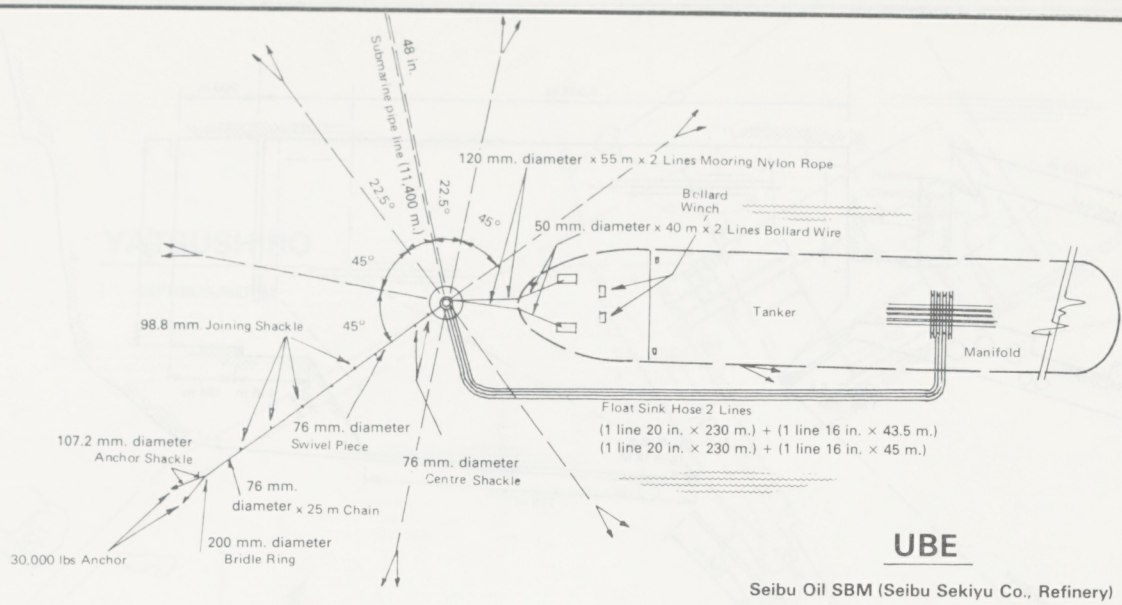

LIVORNO
(Leghorn)
New Dock
Old Dock
Breakwater
Firenze Dock
Cappellini Dock
Foreport
Industrial Channel
Manoeuvring Basin
Access Channel
Pisa Dock
– 12m
Dock No.1
San Stefano Basin
Breakwater
Toscana Dock
(To be dredged to – 13m)
N
Container terminals and container storage areas


Hashitani River
Chika River
Nakiri River
Idei River
-3.00 m.
-4.5 m.
-6.6 m.
100.0 m.
50 m.
Tanabe
Regional Maritime
Safety Headquarters
-5 m.
Hatajima Island
Shobujima Island
Fishery
Boats
120 m.
-4.5 m.
-2.00 m.
Ebijima Island
200 m.
250 m.
-3 m.
Atonoura
Bay
Old Harbour Area
-5 m.
-10 m.
Port Area
-10 m.
10,000 ton
Anchoring Position
TANABE
MORI PORT DEVELOPMENT PLAN


TOKYO
MINATO WARD
SHINAGAWA WARD
KŌTŌ WARD
Bridge
Heliport
Dangerous Cargo Wharf
Tokyo Harbour Limit
Channel No.3
East Breakwater
West Breakwater
Lumber Wharf
Timber Wharf
Timber Basin
3.0 m.
5.0 m.
8.0 m.
12 m.
10 m.
Mooring Area
Timber Ships
Reclaimed Area
Central Break Water
Channel No.2
Ferry Terminal
Iron & Steel Wharf
Foreign Trade
Liner Wharf
7.5 m.
9.0 m.
Toyosu Wharf
Coal Wharf
Iron & Steel Wharf
Gas Wharf
Harumi Wharf
Sumida River
Hinode Wharf
Shibaura Wharf
No.13 Wharf
Tokyo Customs House
Shinagawa Wharf
Tokyo Port Management Office
Container Wharves
Channel No.1
Oi Wharf
Breakwater
TOKYO AIRPORT
Port of Chiba
CHIBA
Port of Tokyo
Port of Kawasaki
KANAGAWA
Port of Yokohama
Yokosuka

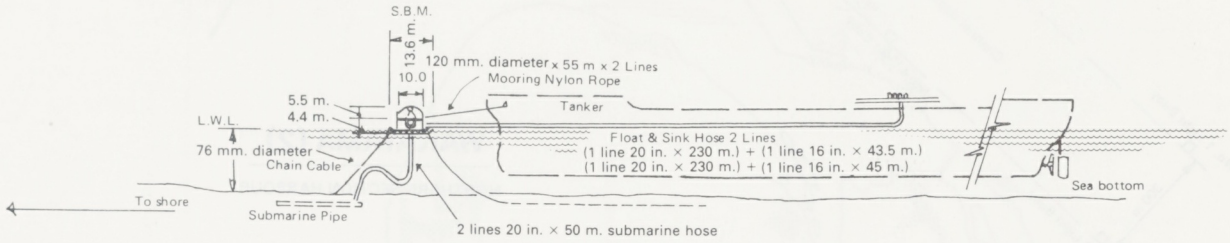

TOMAKOMAI
N
Yufutsu Anchorage
Central Fairway
Yufutsu Fairway
Commercial Port Area
Coal Yard
Industrial Port Area
Power Stations
Idemitsu Co., Ltd. Hokkaido Refinery
Yufutsu-Hama District Site for Disposal of Waste Material
Industrial Site (Under Construction)
Inner Port Area Fairway
West Breakwater
East Breakwater
South Breakwater
East Outside Breakwater
Outer Port Area Fairway
250,000 d.w.t. Class Sea Berth of Idemitsu Kosan Co. Ltd.
500,000 d.w.t. Class Sea Berth (Future Plan)
Inside Breakwater
Central Waterway
Anchorage
Water Area for Dangerous Cargo
East Waterway
Outer Port Fairway
Central Port Fairway
Fairway
Central Breakwater
East Fairway
East Breakwater

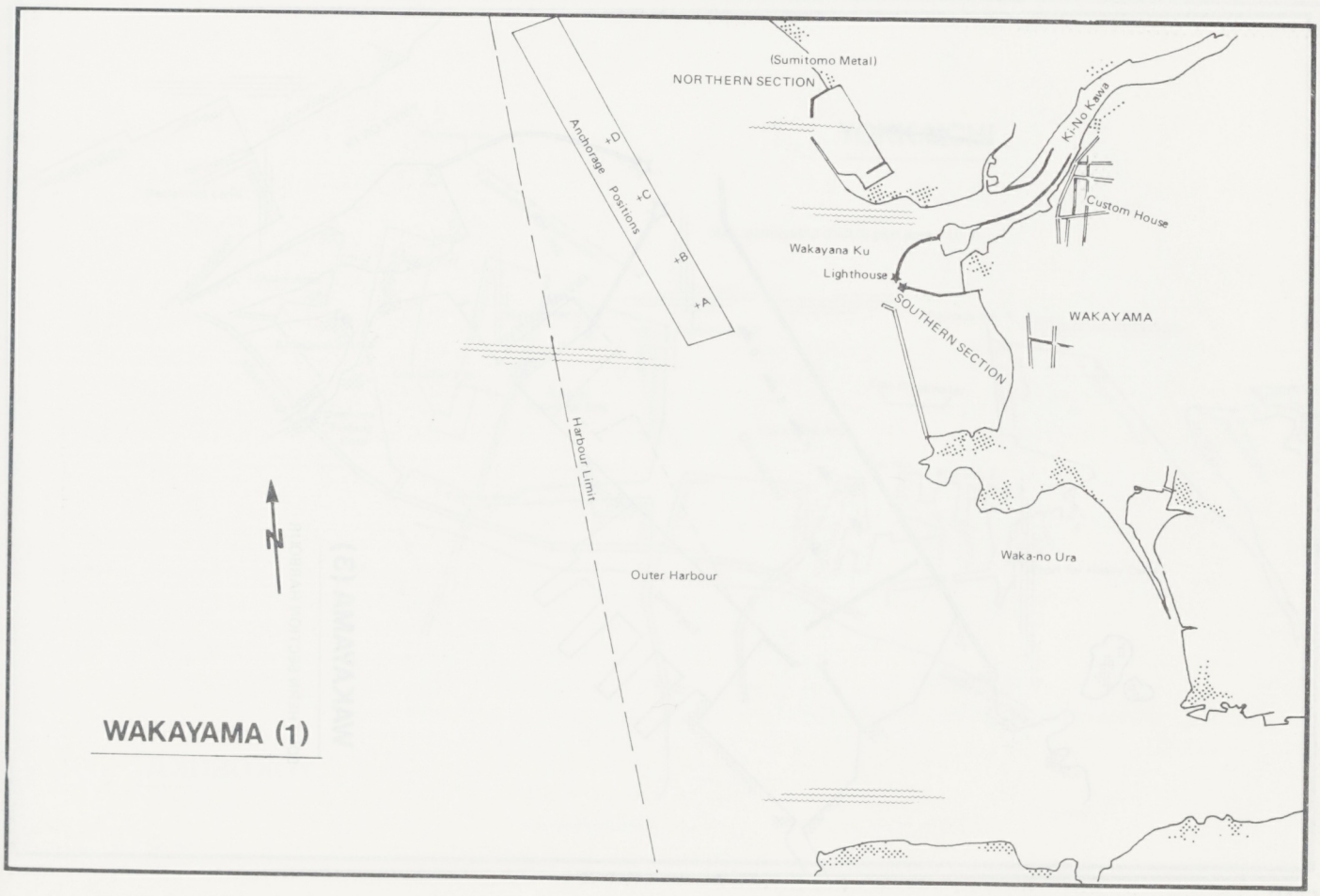

UBE
DEPTHS IN METRES
Customs
Quarantine
Public Pier
Port Captain Port Authority
Public Shinnachi Wharf
No.3
No.2
No.1
Ube Kosan Wharves
Cement Berth
PORT OF UBE
Public Kinoyama Wharf
Ube Kosan No.5
Public Shibanaka Wharf (New)
(Old)
Public Shibanaka East Wharf
Main Channel



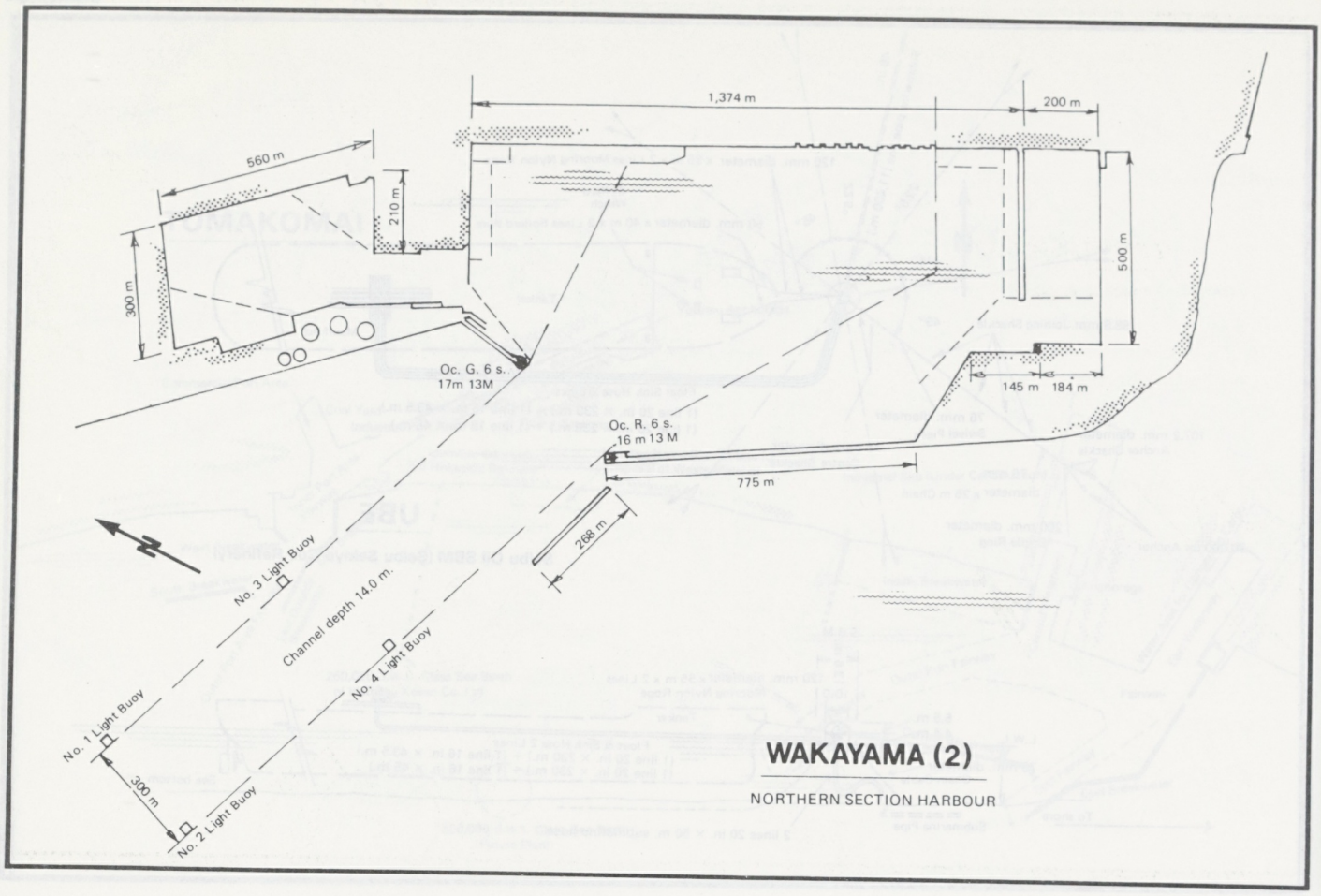
UBE

Seibu Oil SBM (Seibu Sekiyu Co., Refinery)



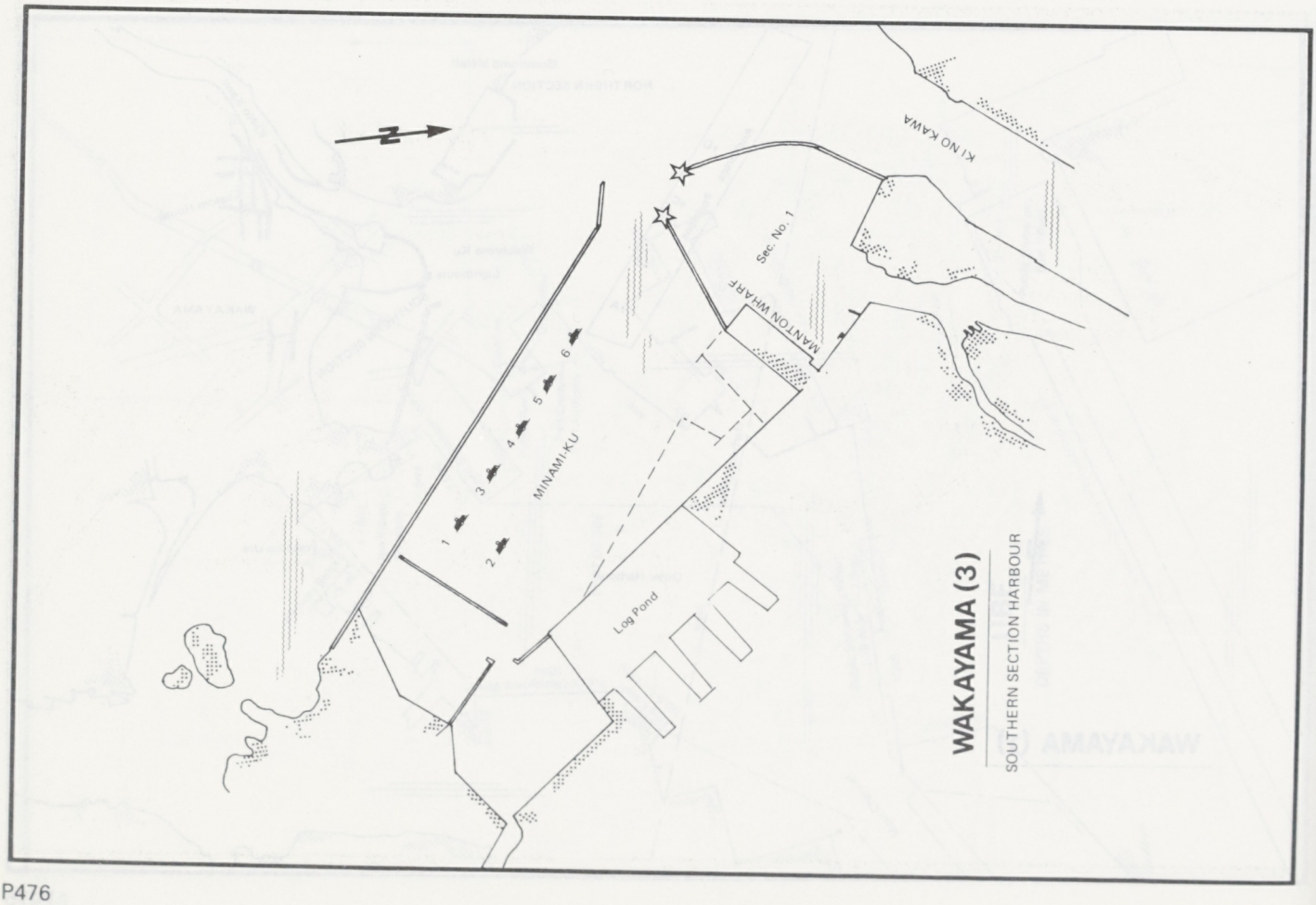


WAKAYAMA (1)



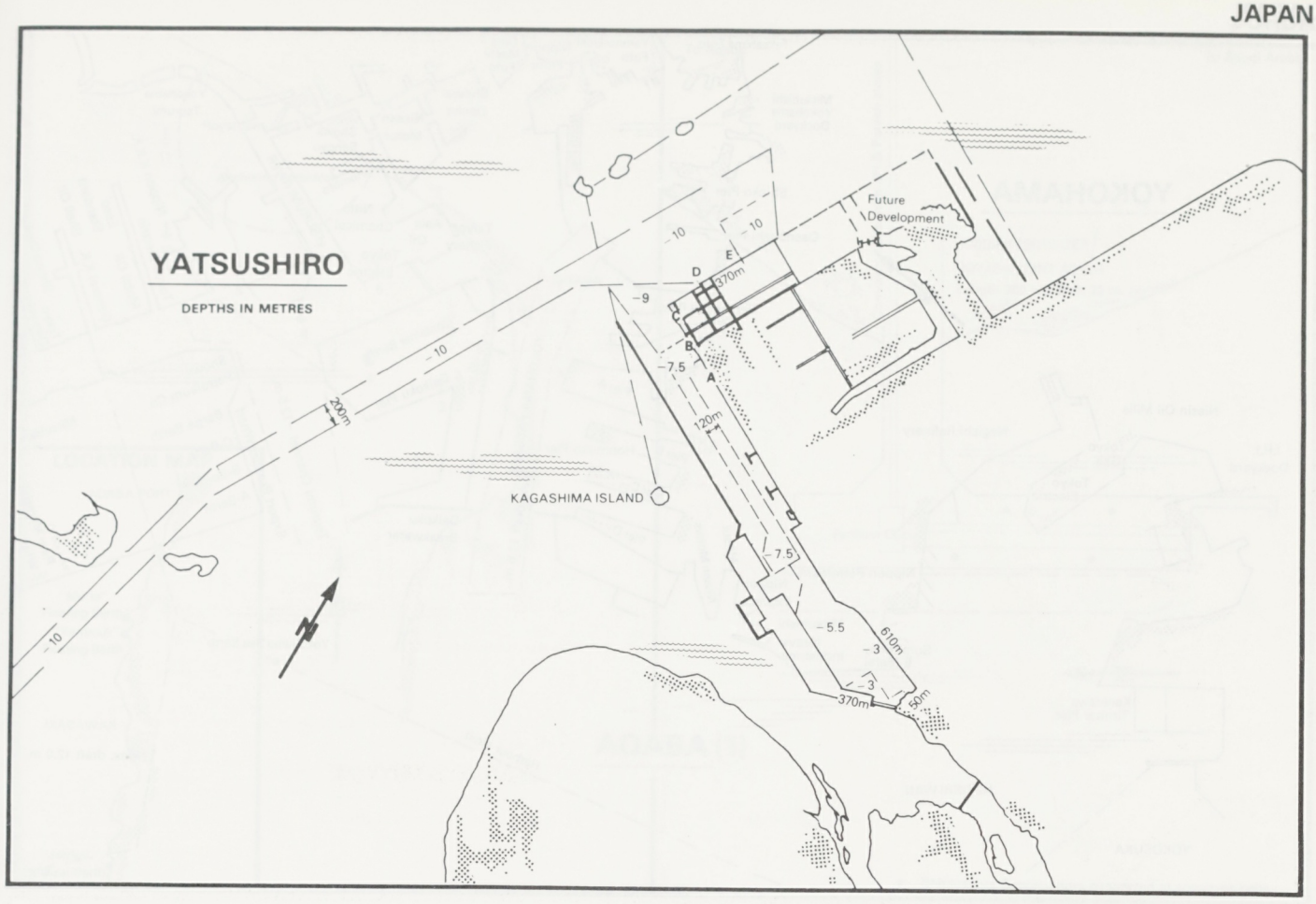
WAKAYAMA (2)

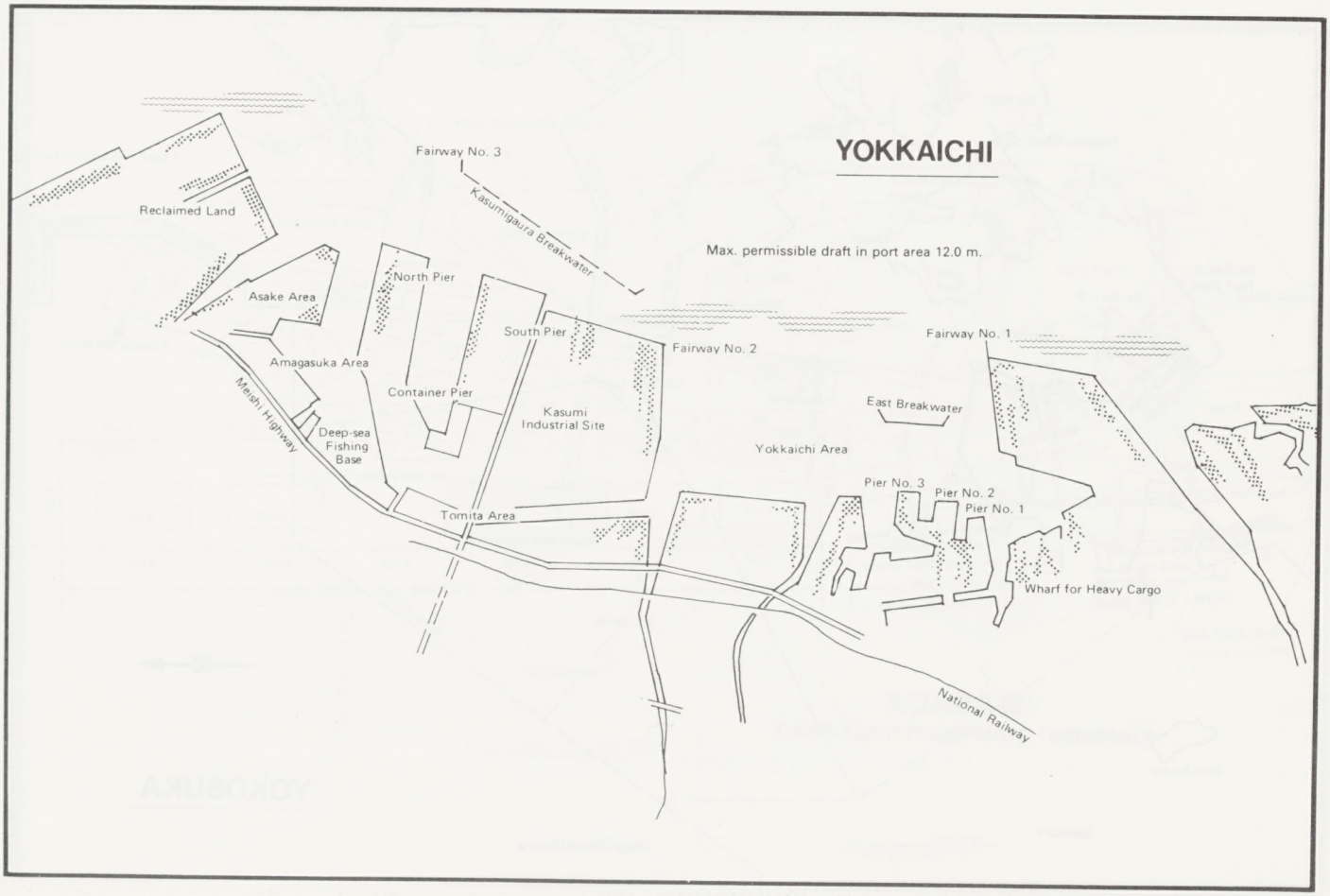
NORTHERN SECTION HARBOUR

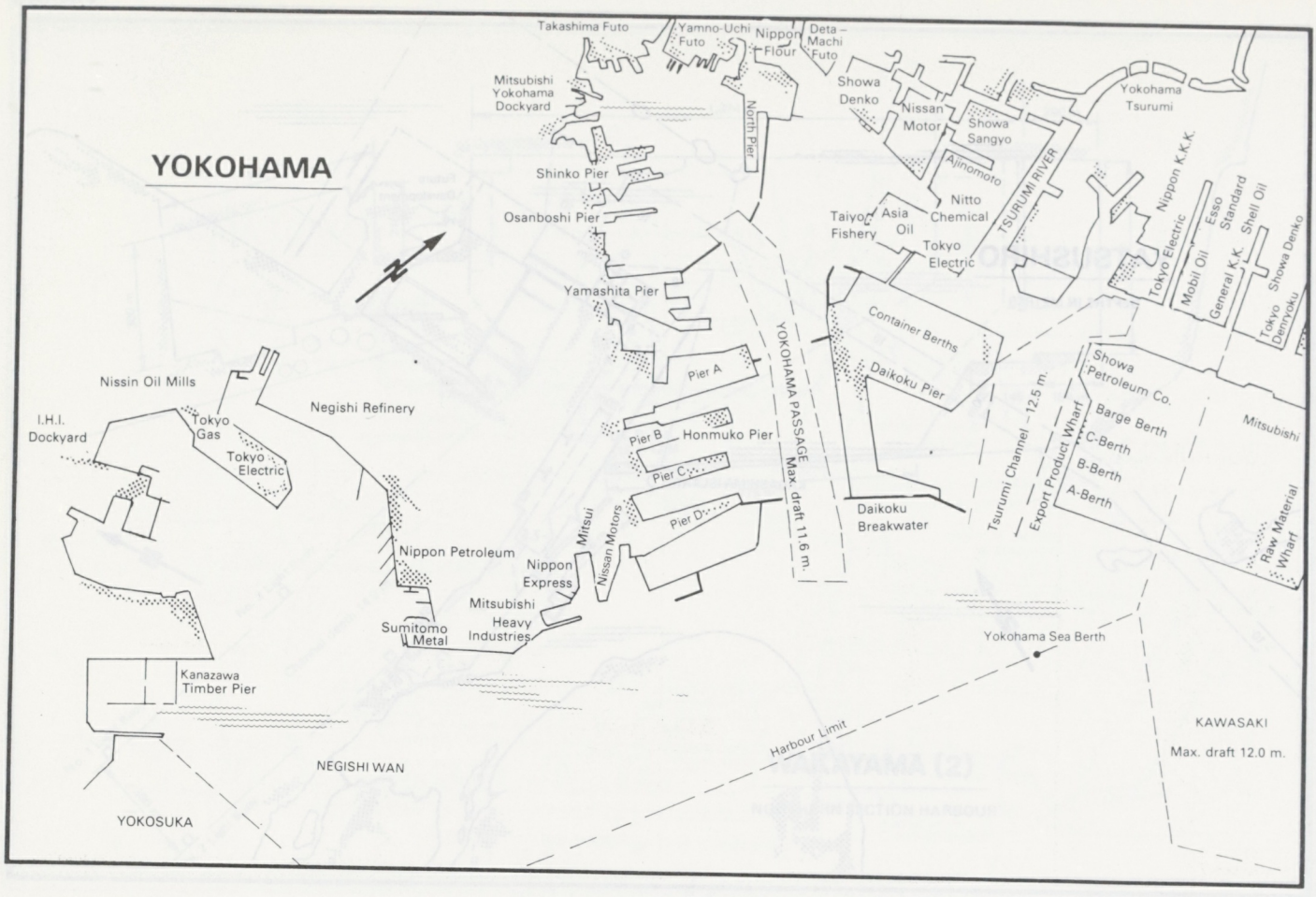


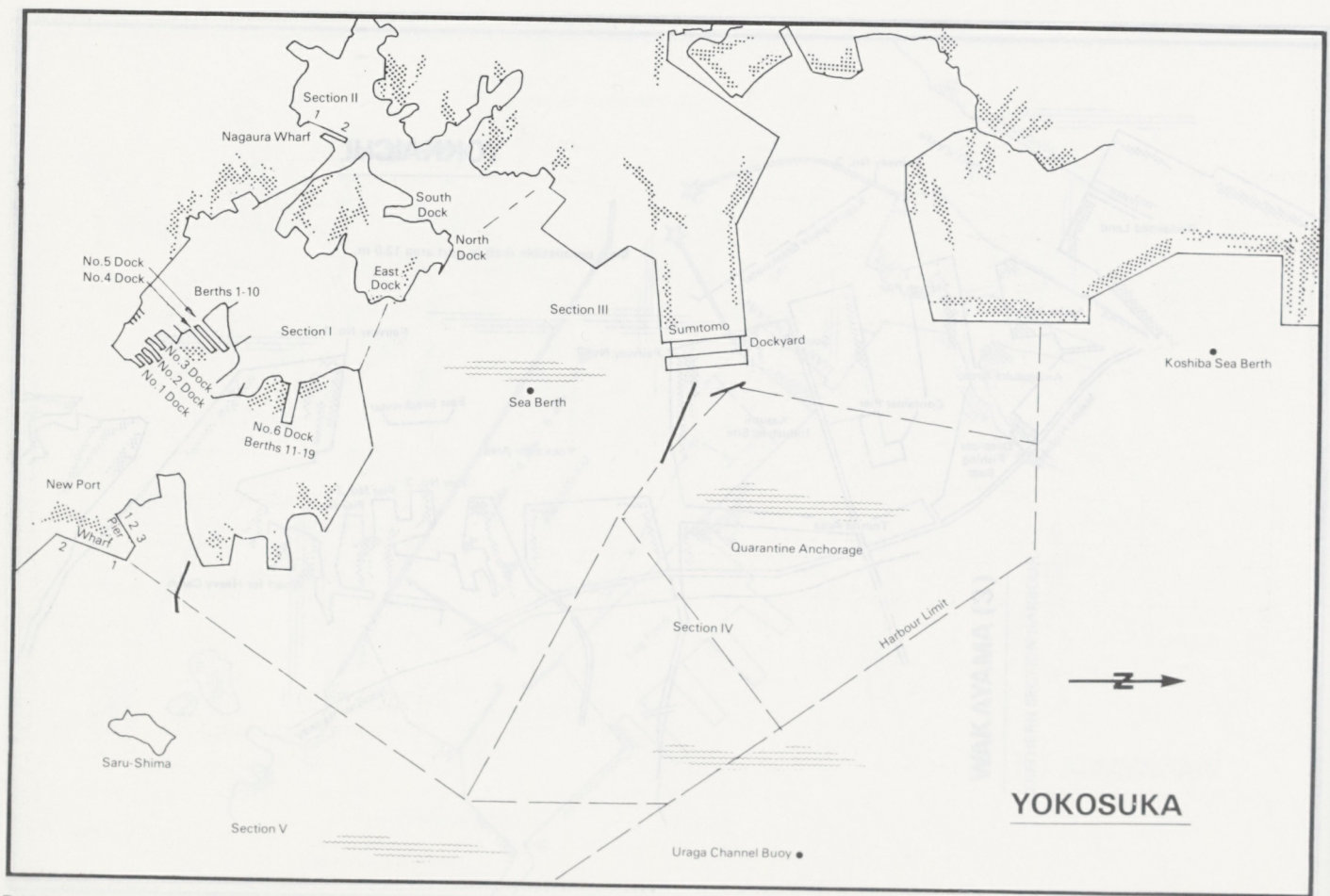
WAKAYAMA (3)

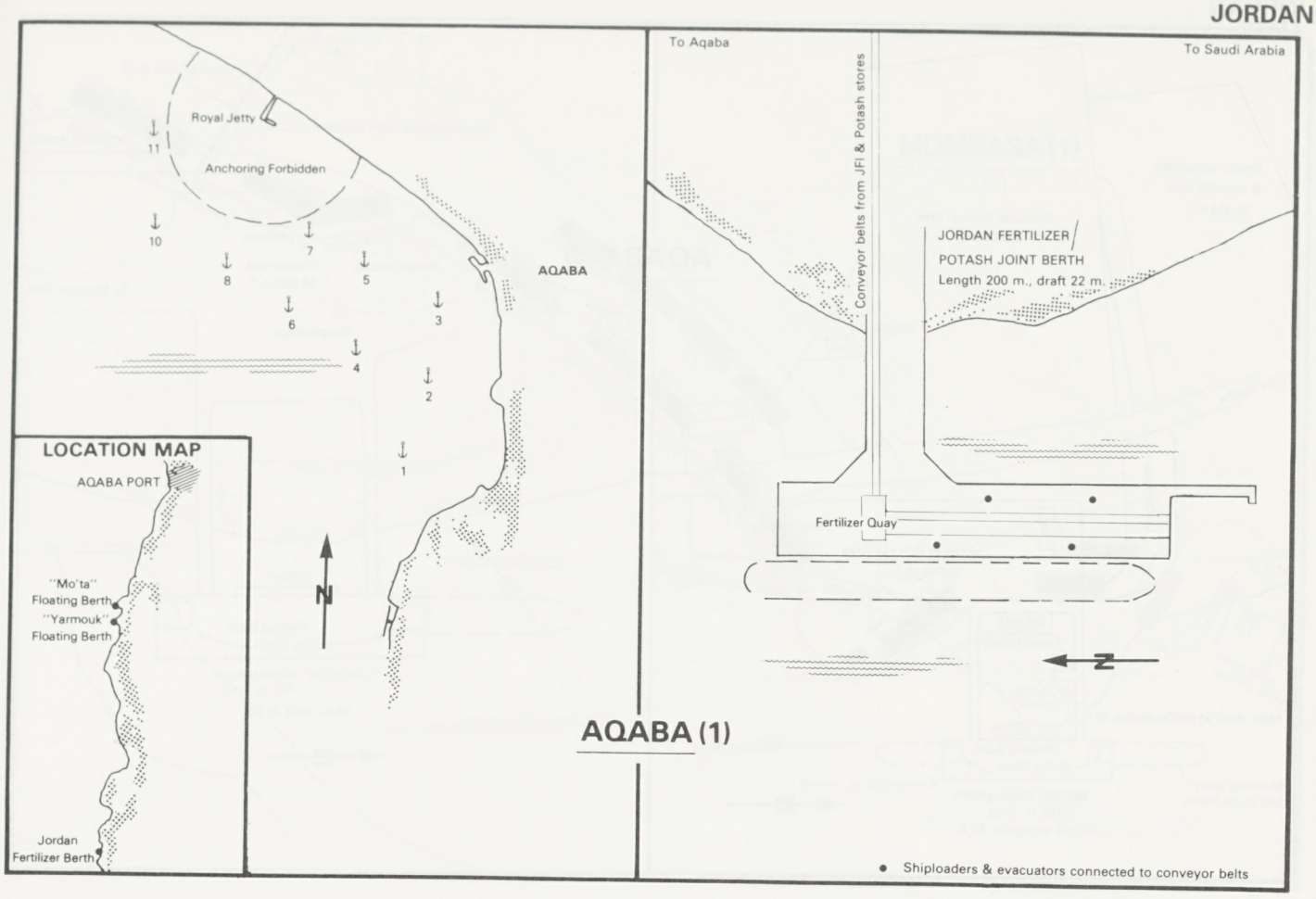
SOUTHERN SECTION HARBOUR


YATSUSHIRO
DEPTHS IN METRES
Future Development
370m
E
D
C
B
A
-10
-9
-7.5
120m
200m
KAGASHIMA ISLAND
7.5
-5.5
610m
-3
3
370m
50m

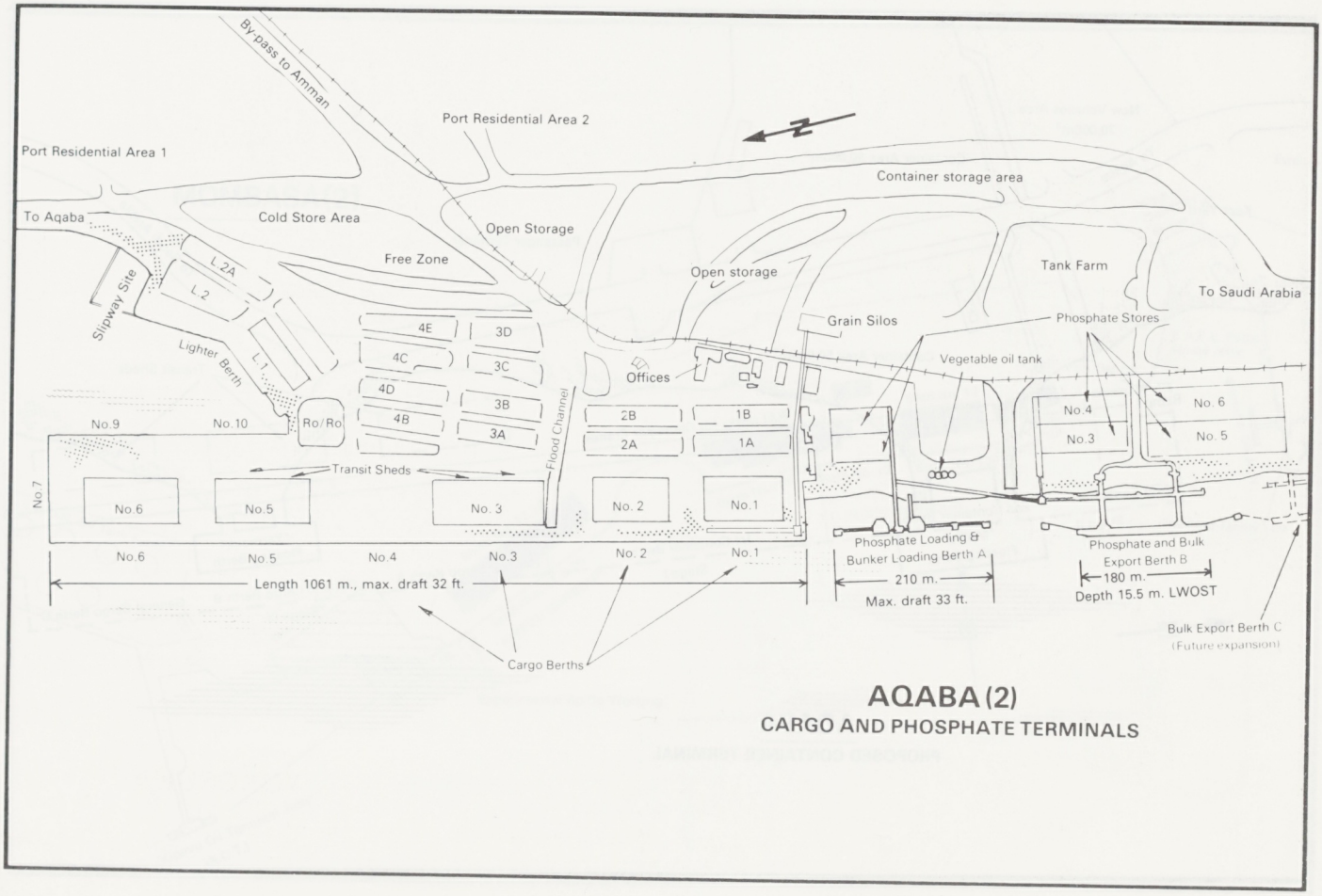

YOKKAICHI
Max. permissible draft in port area 12.0 m.
Fairway No. 3
Kasumigaura Breakwater
Reclaimed Land
Asake Area
North Pier
South Pier
Fairway No. 2
Fairway No. 1
Amagasuka Area
Container Pier
Kasumi Industrial Site
East Breakwater
Meishi Highway
Deep-sea Fishing Base
Yokkaichi Area
Pier No. 3
Pier No. 2
Pier No. 1
Tomita Area
Wharf for Heavy Cargo
National Railway


YOKOHAMA
Takashima Futo
Yamno-Uchi Futo
Nippon Flour
Deta-Machi Futo
Mitsubishi Yokohama Dockyard
North Pier
Showa Denko
Nissan Motor
Showa Sangyo
Yokohama Tsurumi
Shinko Pier
Osanboshi Pier
Ajinomoto
TSURUMI RIVER
Nitto Chemical
Taiyo Fishery
Asia Oil
Tokyo Electric
Nippon K.K.K.
Tokyo Electric
Mobil Oil
Esso Standard
General K.K.
Shell Oil
Tokyo Denryoku
Showa Denko
Yamashita Pier
Container Berths
Pier A
Daikoku Pier
YOKOHAMA PASSAGE Max. draft 11.6 m.
Showa Petroleum Co.
Barge Berth
C-Berth
B-Berth
A-Berth
Export Product Wharf
Tsurumi Channel – 12.5 m.
Mitsubishi
Nissin Oil Mills
I.H.I. Dockyard
Tokyo Gas
Tokyo Electric
Negishi Refinery
Pier B
Honmuko Pier
Pier C
Pier D
Daikoku Breakwater
Raw Material Wharf
Nippon Petroleum
Nippon Express
Mitsui
Nissan Motors
Mitsubishi Heavy Industries
Sumitomo Metal
Yokohama Sea Berth
Kanazawa Timber Pier
Harbour Limit
KAWASAKI
Max. draft 12.0 m.
NEGISHI WAN
YOKOSUKA

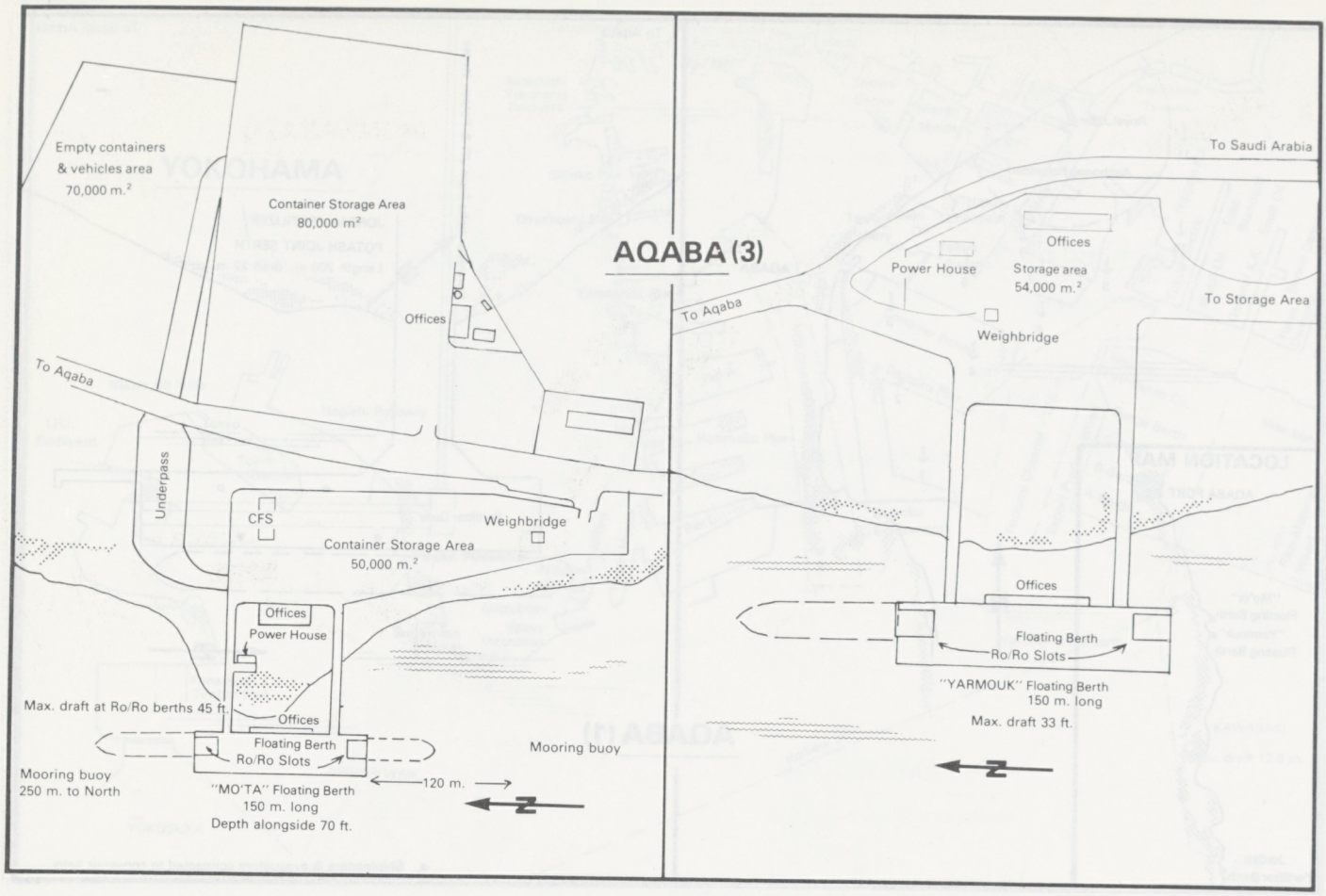

Section II
Nagaura Wharf
South Dock
North Dock
East Dock
No.5 Dock
No.4 Dock
Berths 1-10
Section I
No.3 Dock
No.2 Dock
No.1 Dock
No.6 Dock
Berths 11-19
Section III
Sumitomo Dockyard
Sea Berth
Koshiba Sea Berth
New Port
Pier
Wharf
Quarantine Anchorage
Section IV
Harbour Limit
Saru-Shima
Section V
Uraga Channel Buoy
YOKOSUKA

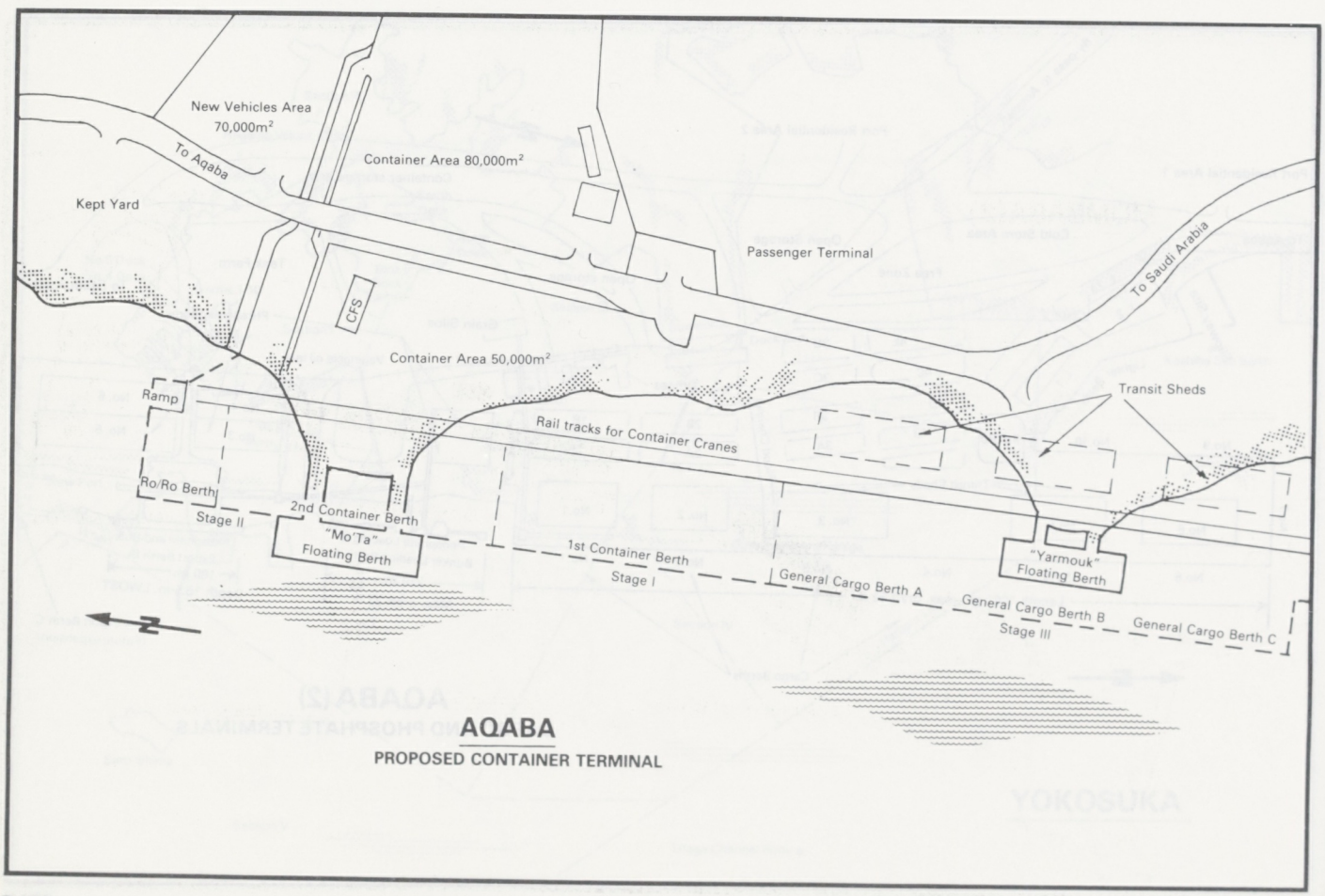


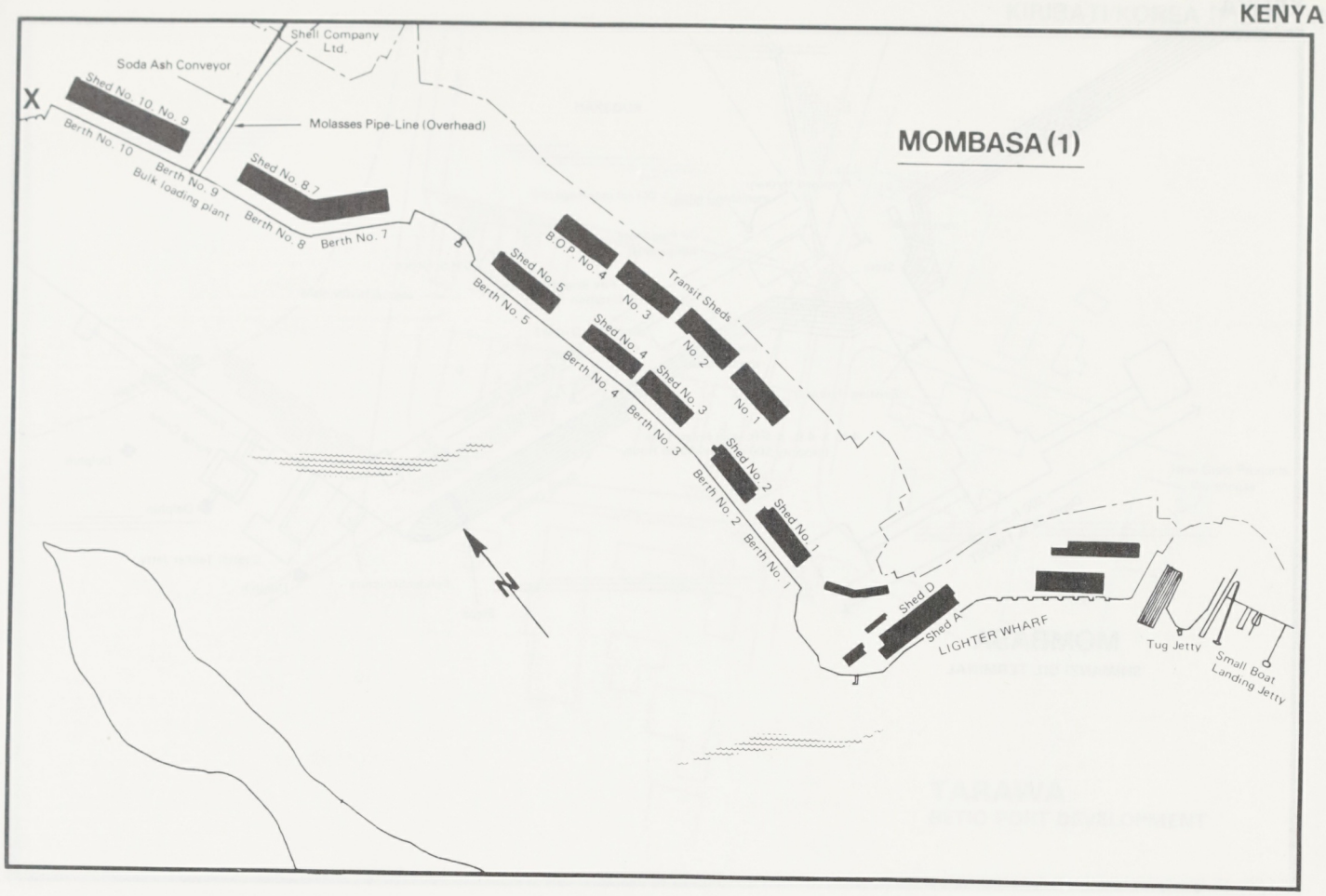
AQABA (1)

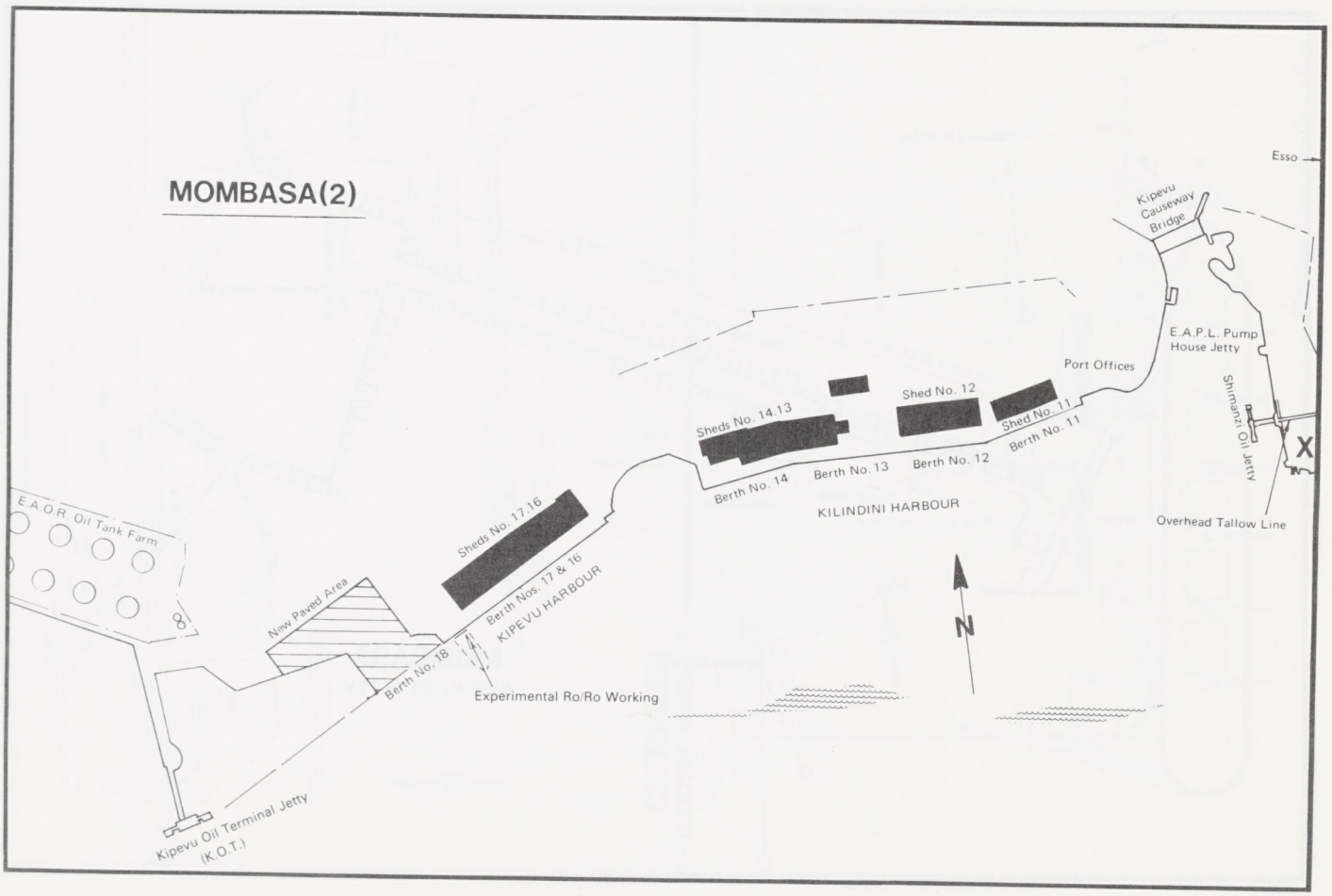


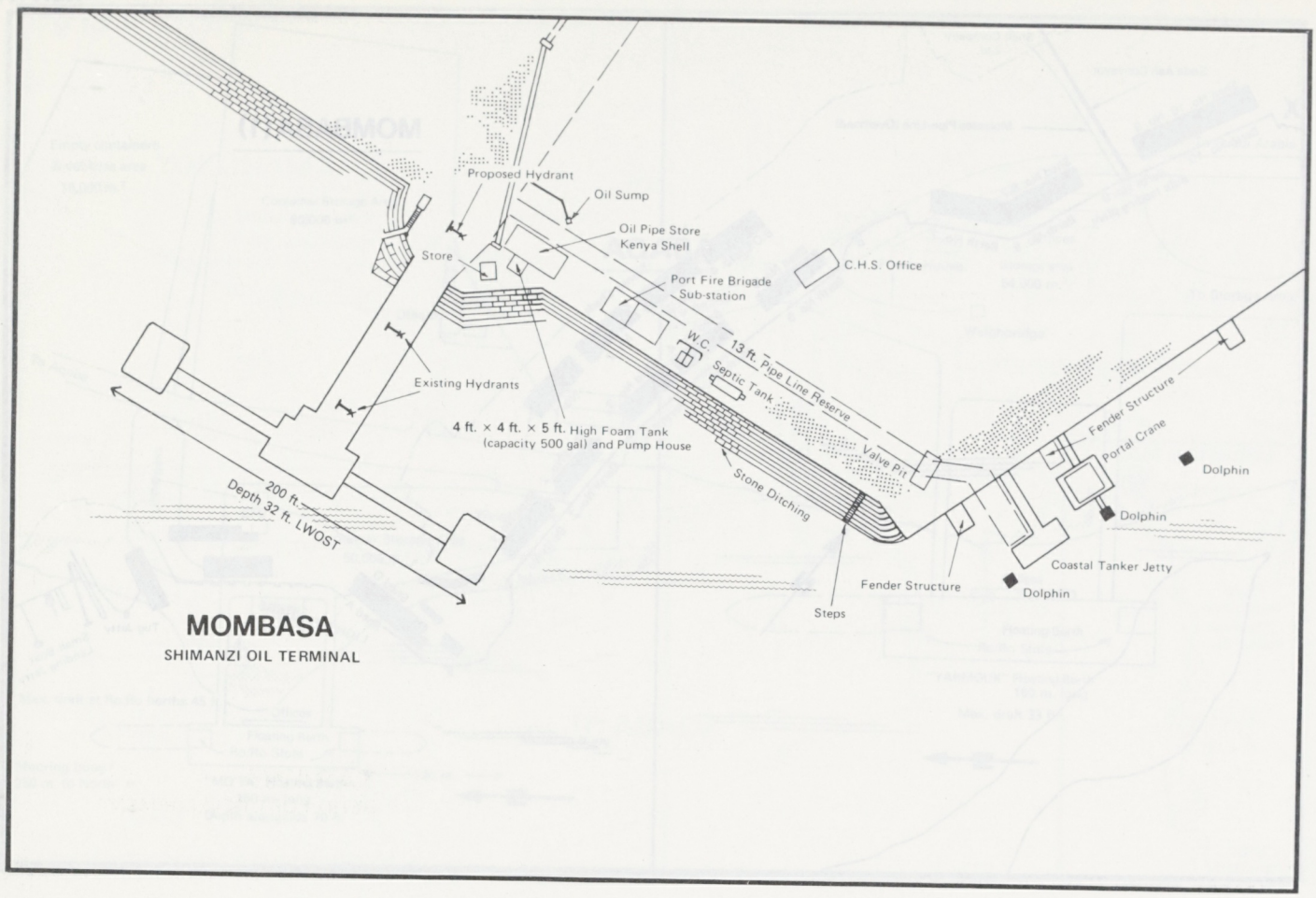
AQABA (2)
CARGO AND PHOSPHATE TERMINALS


AQABA (3)
Empty containers & vehicles area 70,000 m.²
Container Storage Area 80,000 m²
Offices
To Aqaba
Underpass
CFS
Weighbridge
Container Storage Area 50,000 m.²
Offices
Power House
Max. draft at Ro/Ro berths 45 ft.
Offices
Floating Berth
Ro/Ro Slots
Mooring buoy
Mooring buoy 250 m. to North
"MO'TA" Floating Berth 150 m. long
Depth alongside 70 ft.
120 m.
To Saudi Arabia
Offices
Power House
Storage area 54,000 m.²
To Storage Area
To Aqaba
Weighbridge
Offices
Floating Berth
Ro/Ro Slots
"YARMOUK" Floating Berth 150 m. long
Max. draft 33 ft.

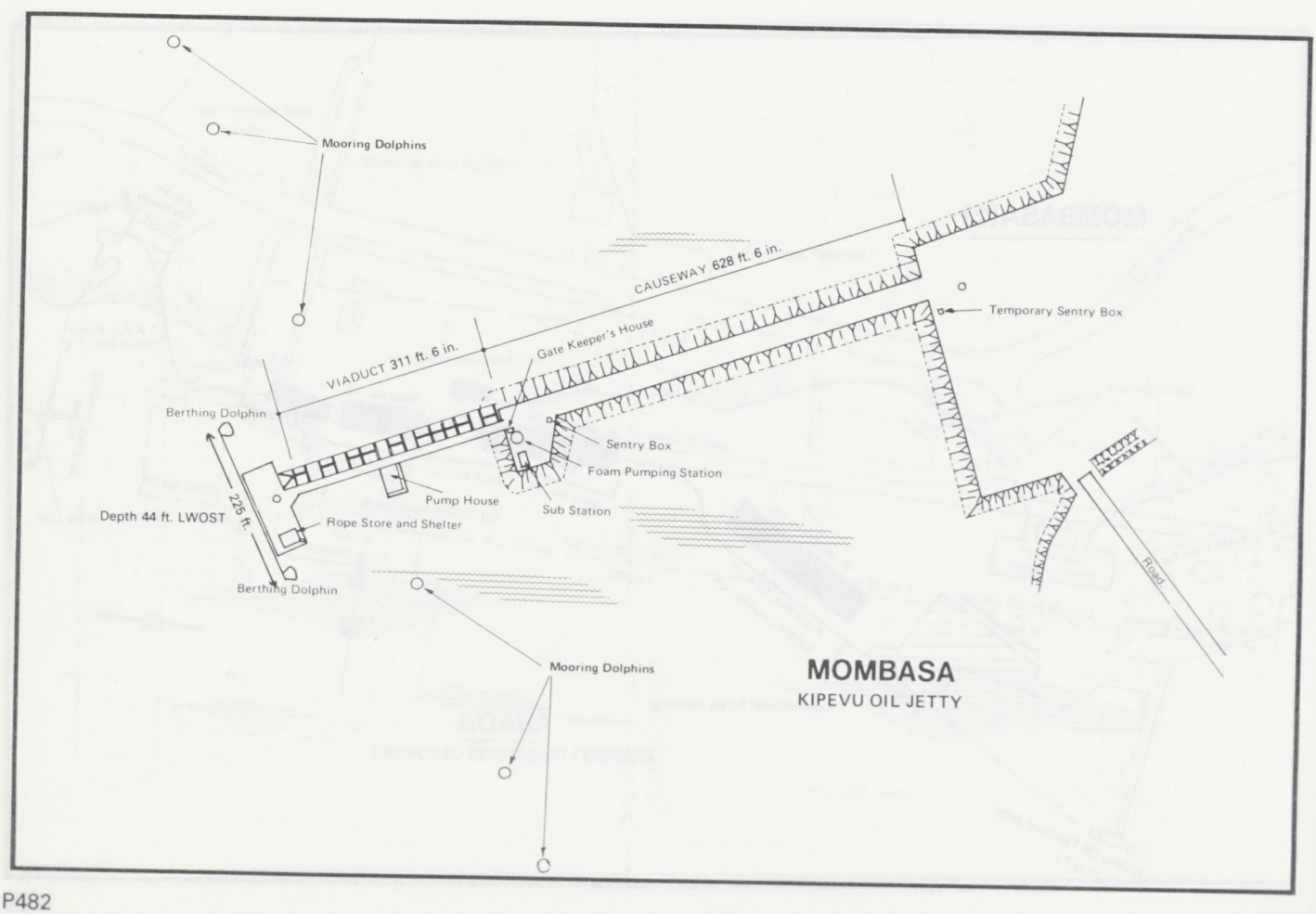

New Vehicles Area 70,000m²
To Aqaba
Container Area 80,000m²
Kept Yard
Passenger Terminal
To Saudi Arabia
CFS
Container Area 50,000m²
Ramp
Transit Sheds
Rail tracks for Container Cranes
Ro/Ro Berth Stage II
2nd Container Berth
"Mo'Ta" Floating Berth
1st Container Berth Stage I
"Yarmouk" Floating Berth
General Cargo Berth A
General Cargo Berth B Stage III
General Cargo Berth C
AQABA
PROPOSED CONTAINER TERMINAL


MOMBASA (1)
Shell Company Ltd.
Soda Ash Conveyor
Shed No. 10
No. 9
X
Berth No. 10
Berth No. 9
Bulk loading plant
Molasses Pipe-Line (Overhead)
Shed No. 8
7
Berth No. 8
Berth No. 7
B.O.P. No. 4
Shed No. 5
Berth No. 5
No. 3
Transit Sheds
No. 2
No. 1
Shed No. 4
Shed No. 3
Berth No. 4
Berth No. 3
Shed No. 2
Shed No. 1
Berth No. 2
Berth No. 1
N
Shed D
Shed A
LIGHTER WHARF
Tug Jetty
Small Boat Landing Jetty

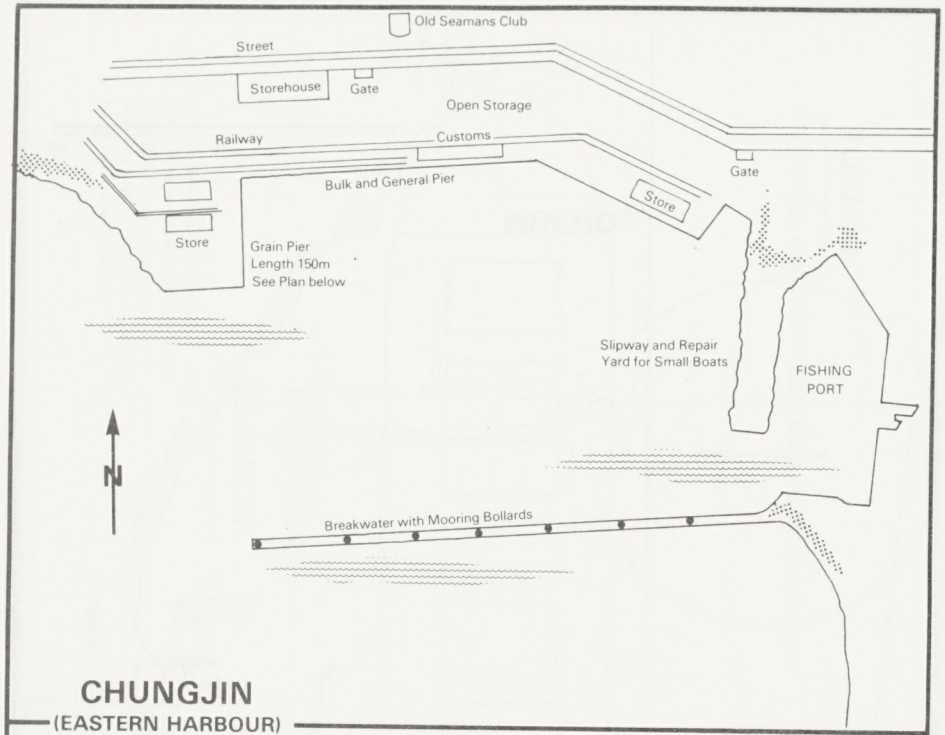

MOMBASA (2)
Esso
Kipevu Causeway Bridge
E.A.P.L. Pump House Jetty
Port Offices
Shed No. 12
Shed No. 11
Sheds No. 14.13
Berth No. 14
Berth No. 13
Berth No. 12
Berth No. 11
Shimanzi Oil Jetty
X
KILINDINI HARBOUR
Overhead Tallow Line
E.A.O.R. Oil Tank Farm
Sheds No. 17.16
New Paved Area
Berth Nos. 17 & 16
KIPEVU HARBOUR
Berth No. 18
Experimental Ro/Ro Working
N
Kipevu Oil Terminal Jetty (K.O.T.)



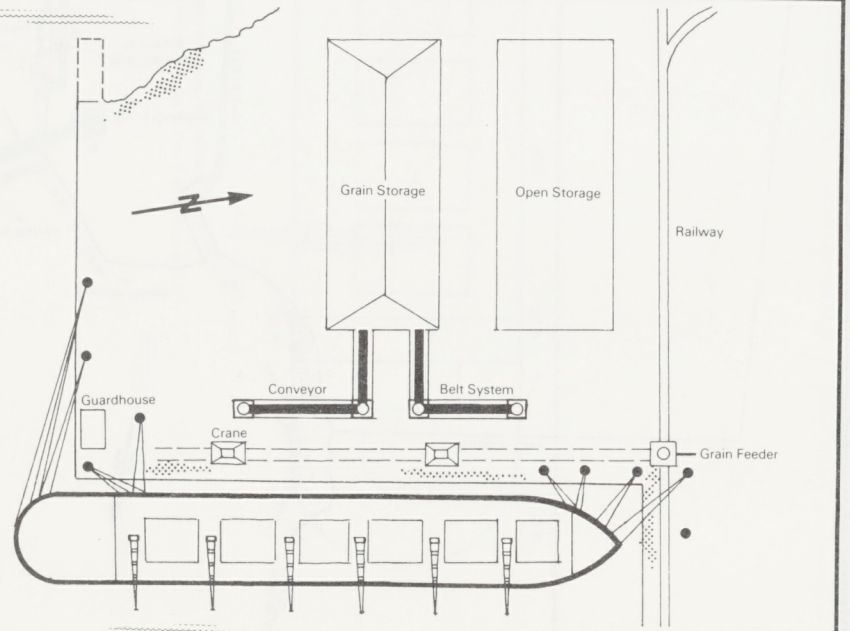
MOMBASA
SHIMANZI OIL TERMINAL



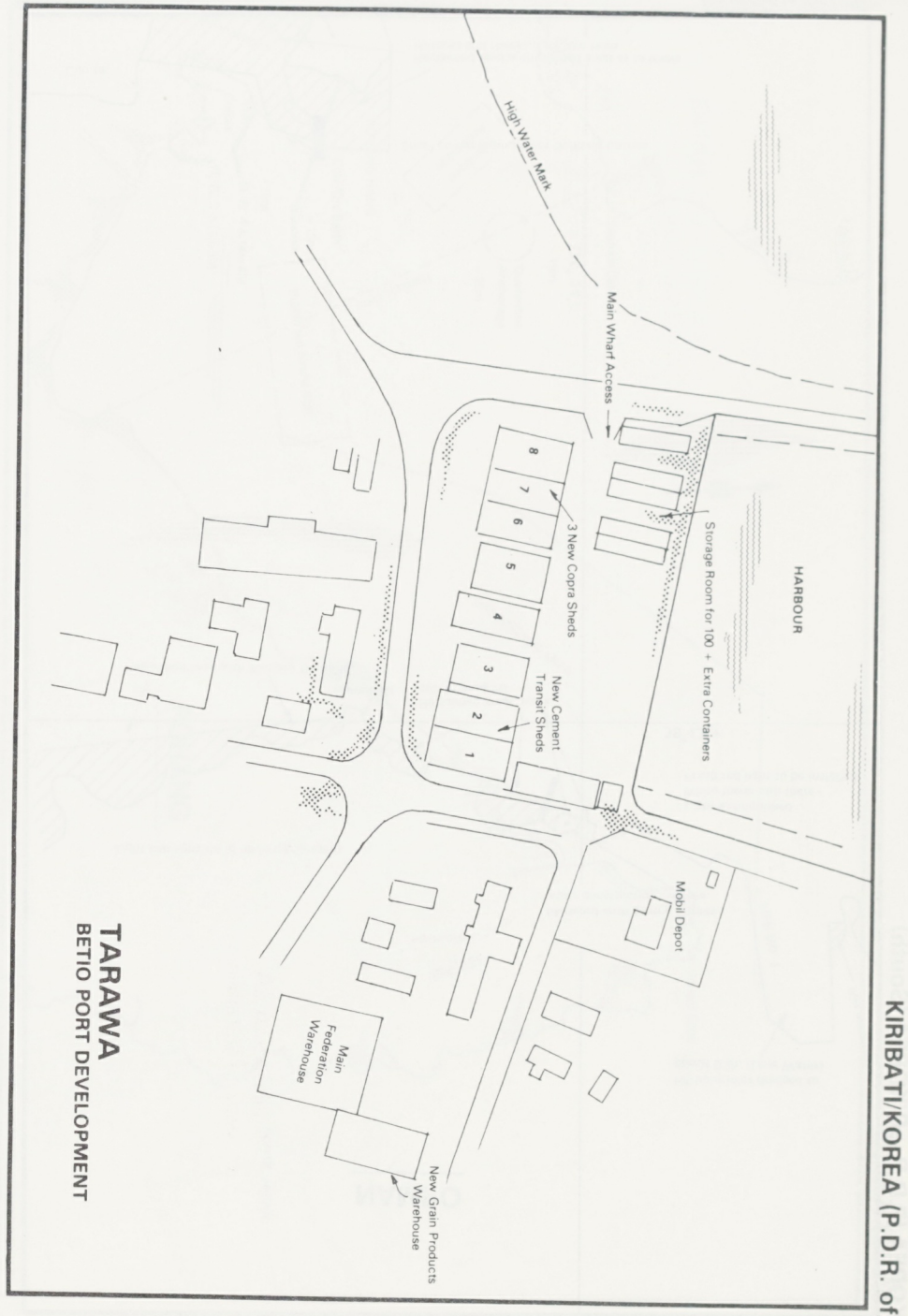
MOMBASA
KIPEVU OIL JETTY



CHUNGJIN
(EASTERN HARBOUR)

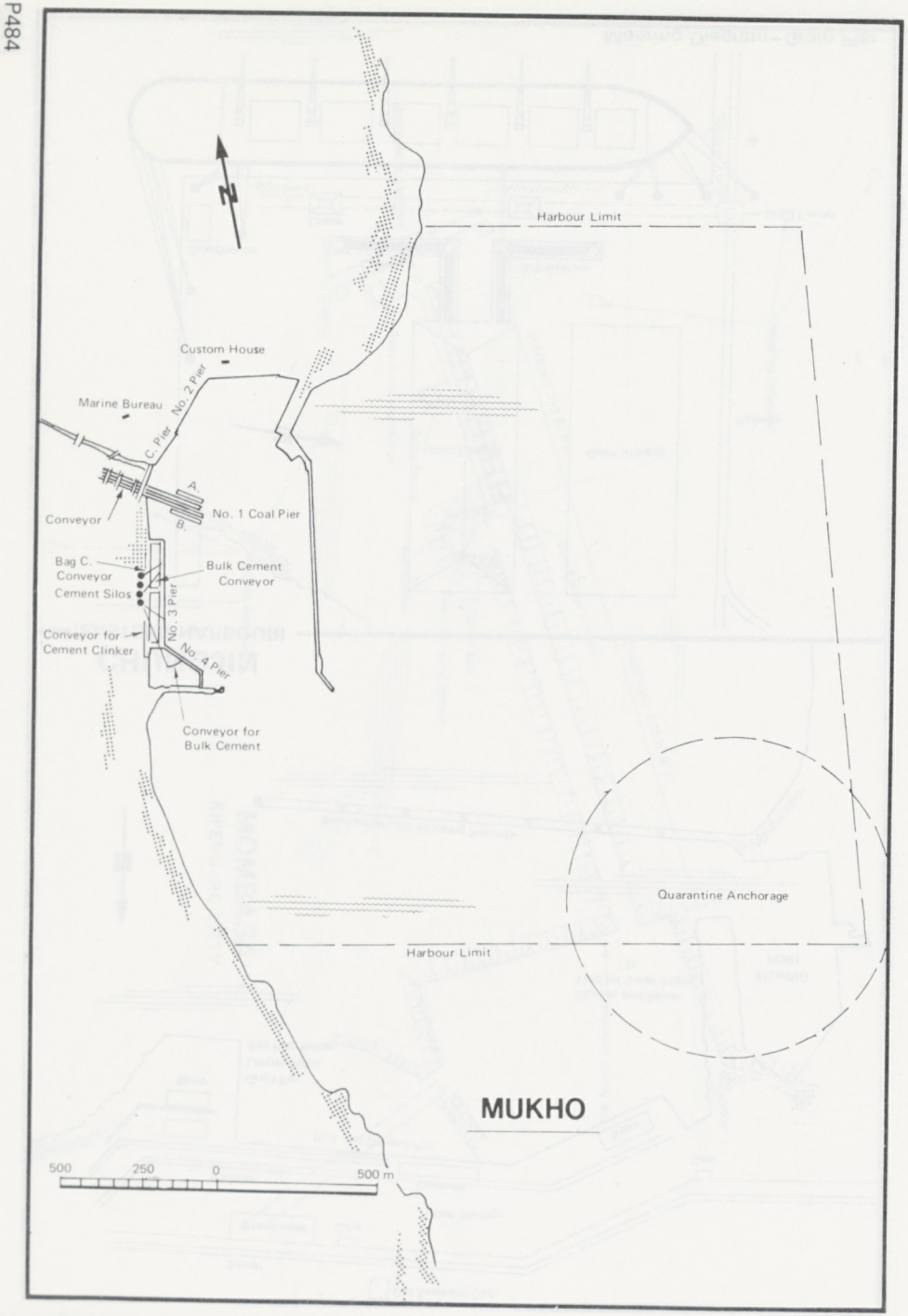


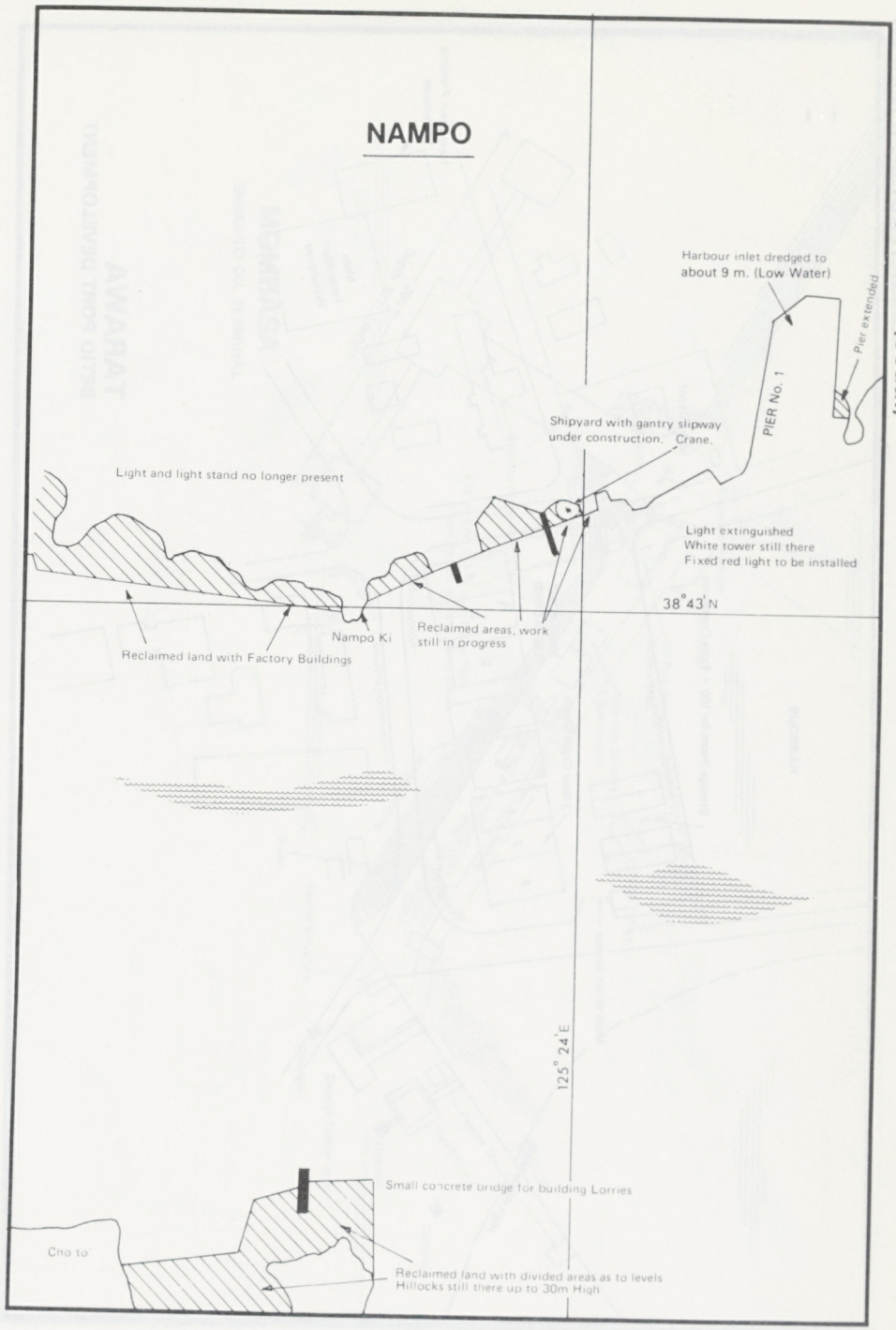
Mooring Diagram–Grain Pier



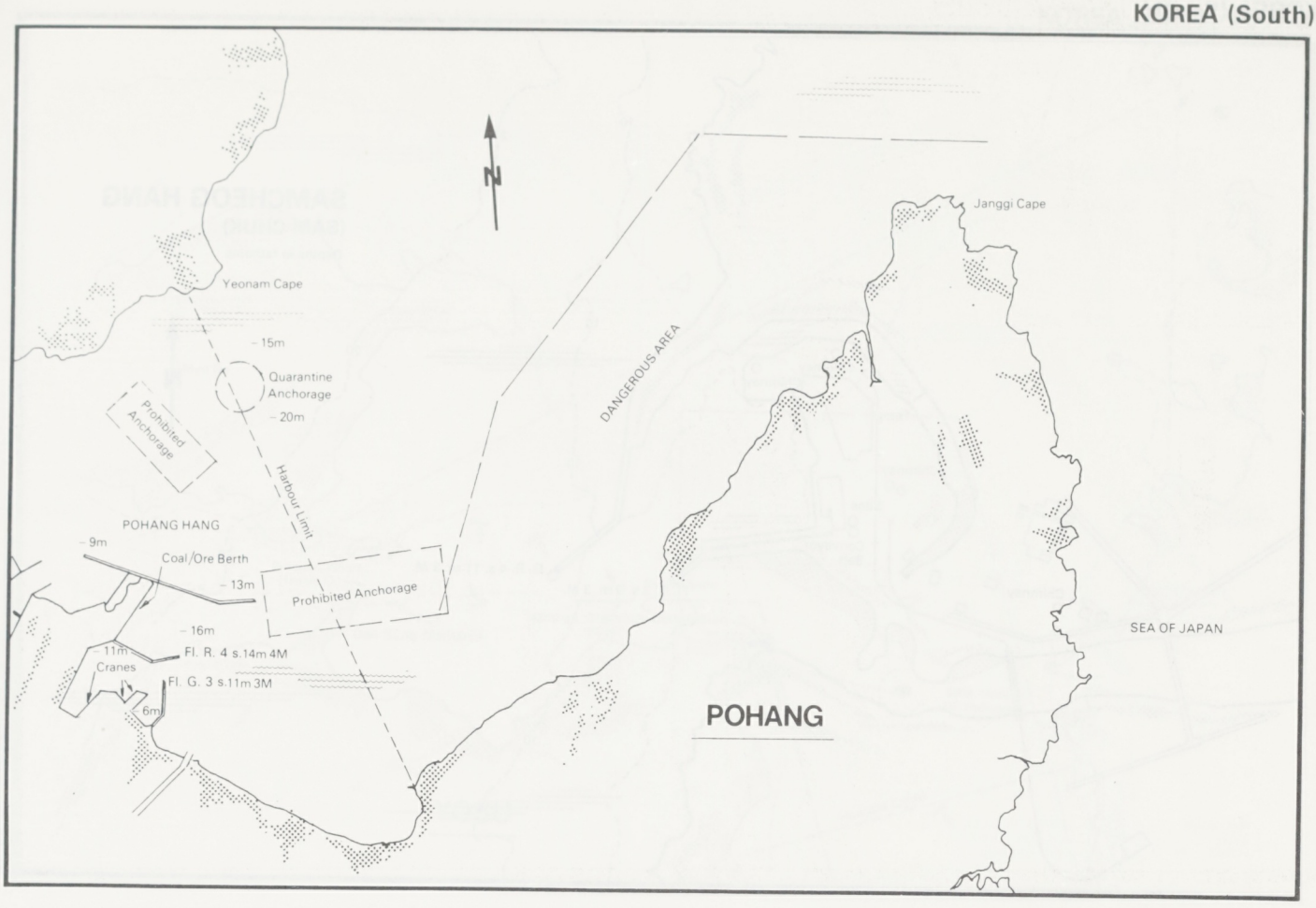
TARAWA
BETIO PORT DEVELOPMENT

KIRIBATI/KOREA (P.D.R. of)



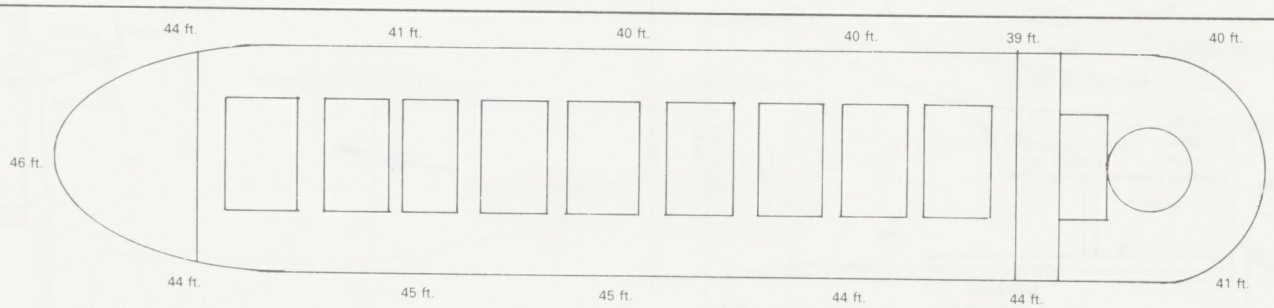


Plan supplied by Ship's Officer.



POHANG

(IRON STEEL COMPANY (POSCO) BULK HANDLING WHARF)

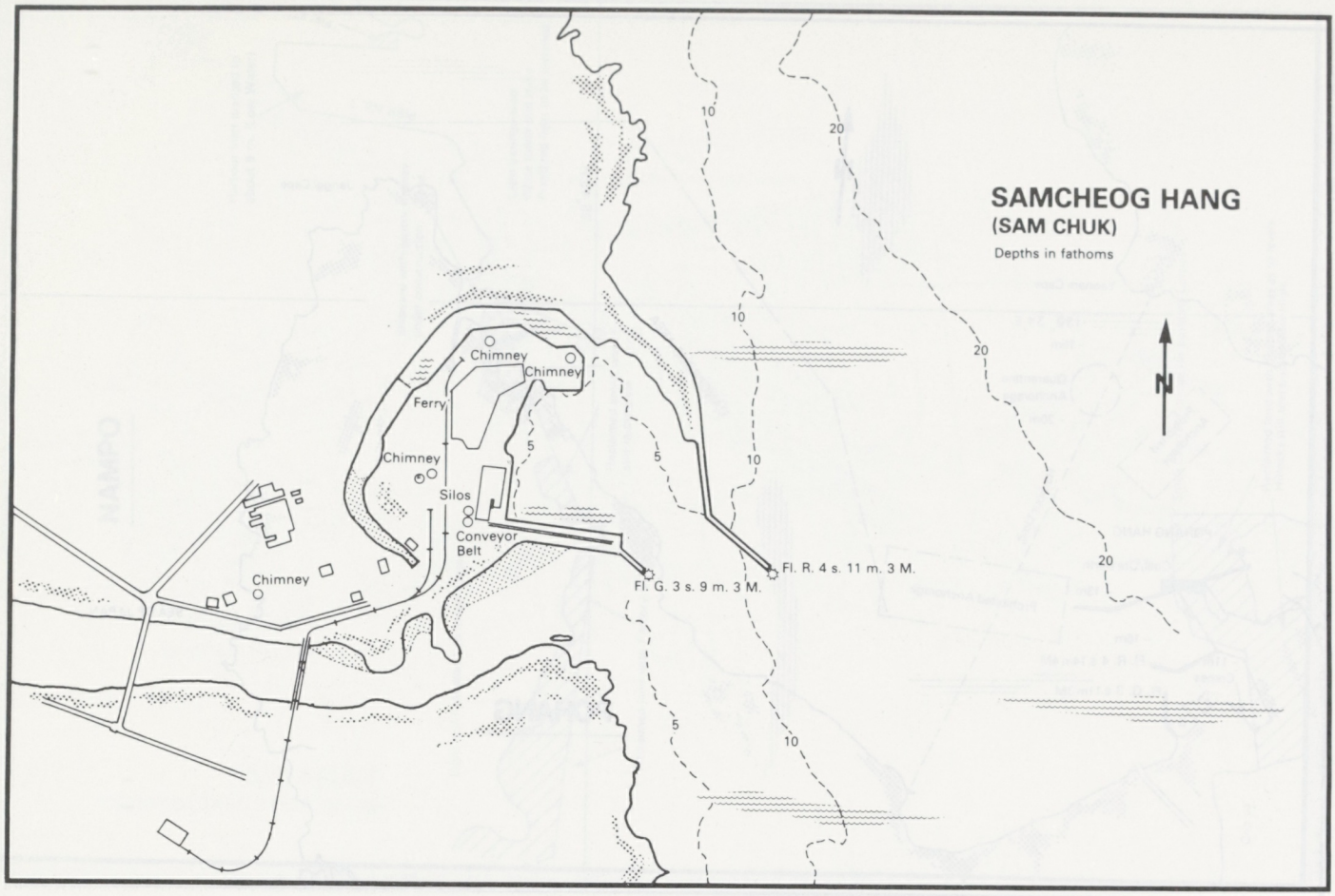


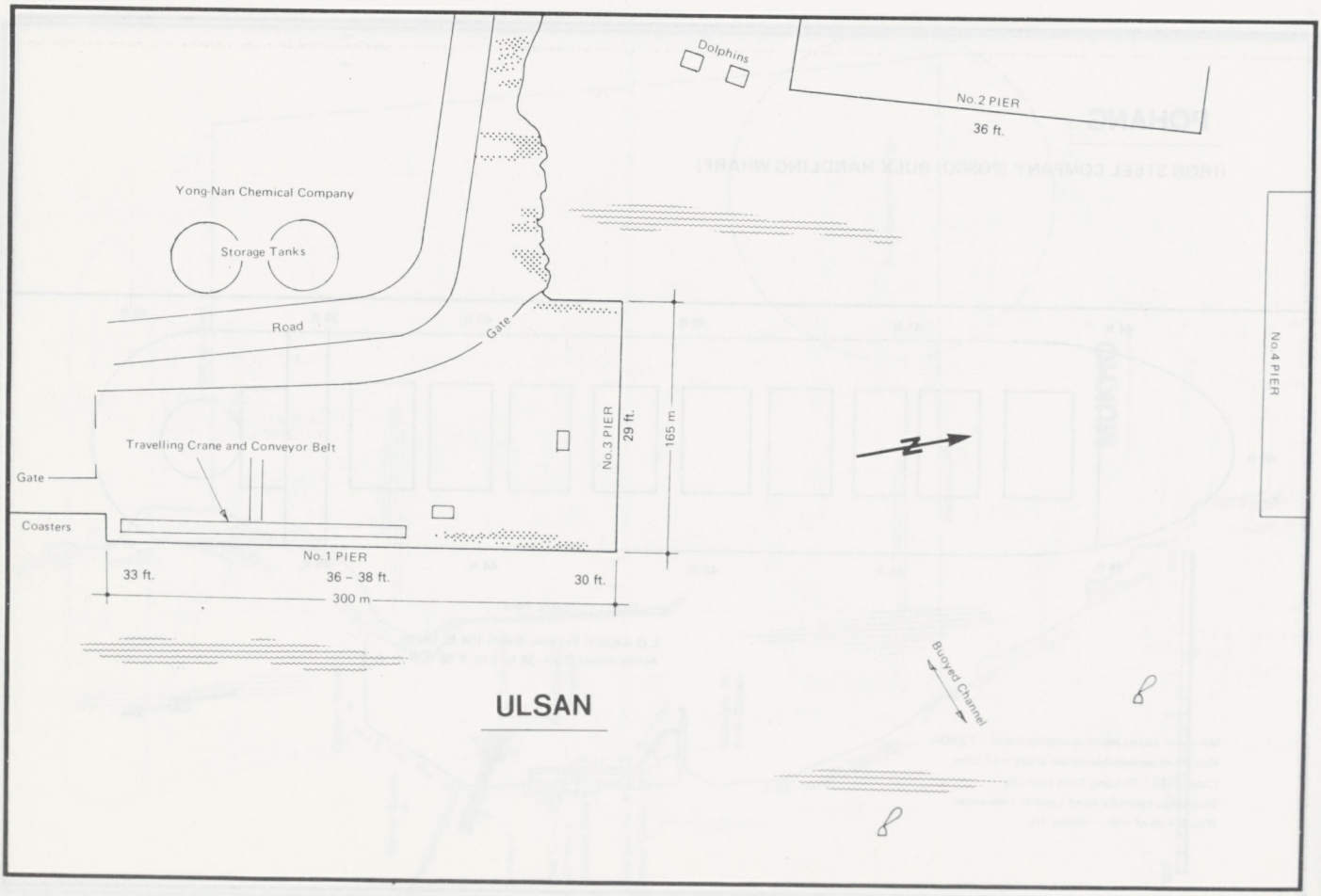
DWT 72,072 Tons

L.O.A 820 ft. Extreme Breath 104 ft. 1¾ in.
Actual arrival Draft 36 ft. 7 in. F 36 ft. 8 in. A

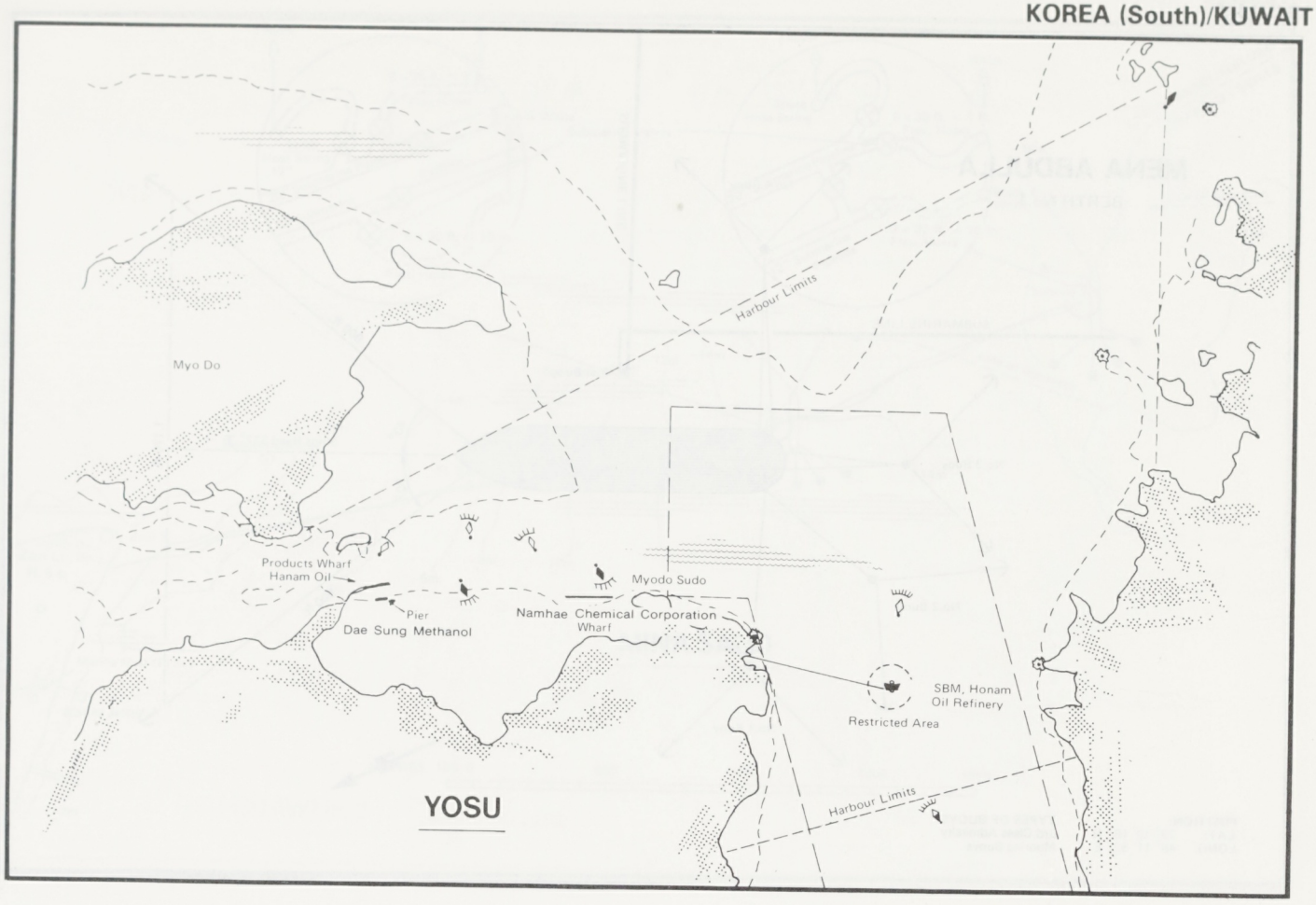
Minimum stated depth alongside Berth = 12.00m
Maximum permissible arrival Draft = 11.20m
Cargo — 55.776 Long Tons Iron Ore
Soundings taken by hand Lead at Low water
Rise & Fall of tide — About 1ft.

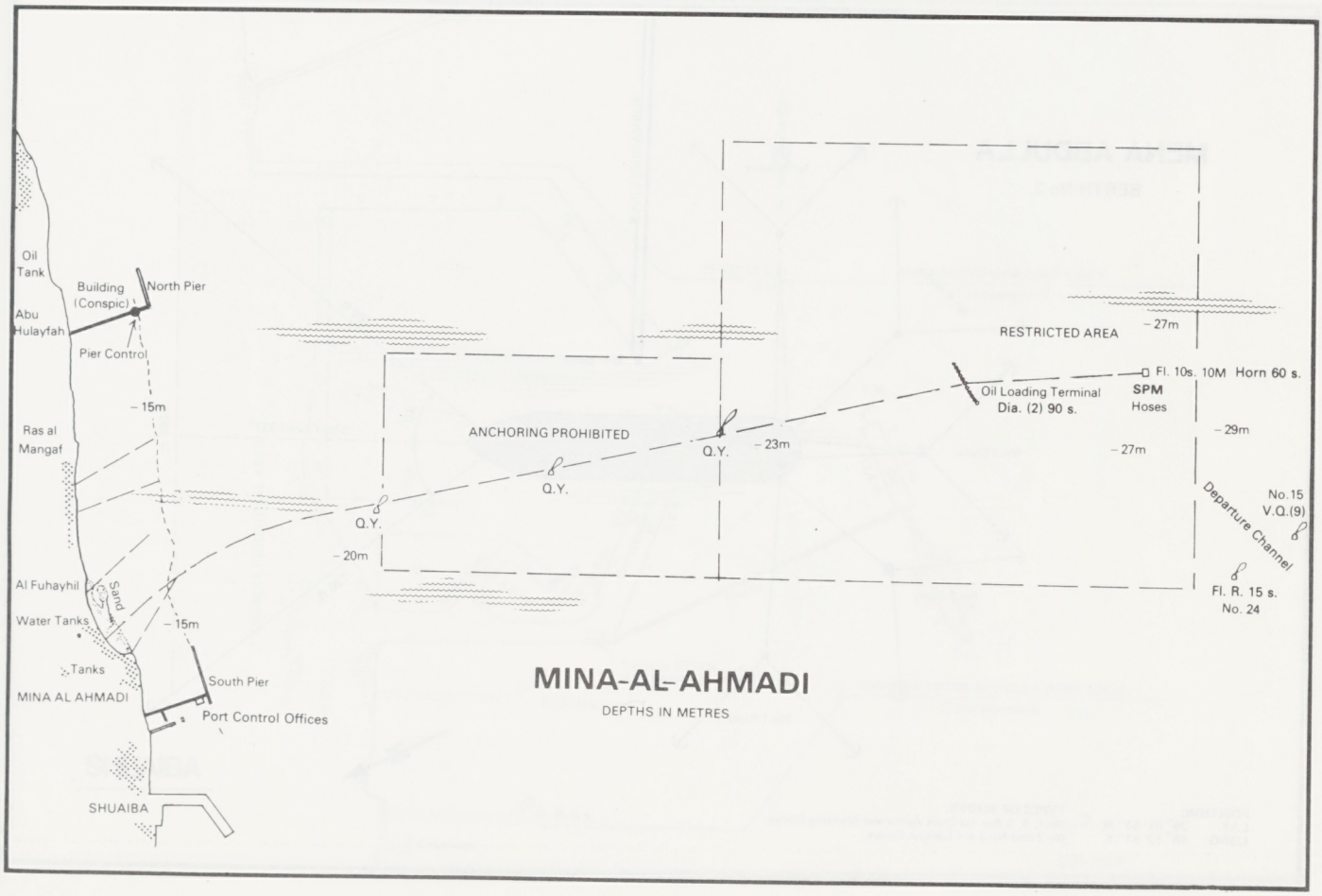
"Plan supplied by Ship's Master"





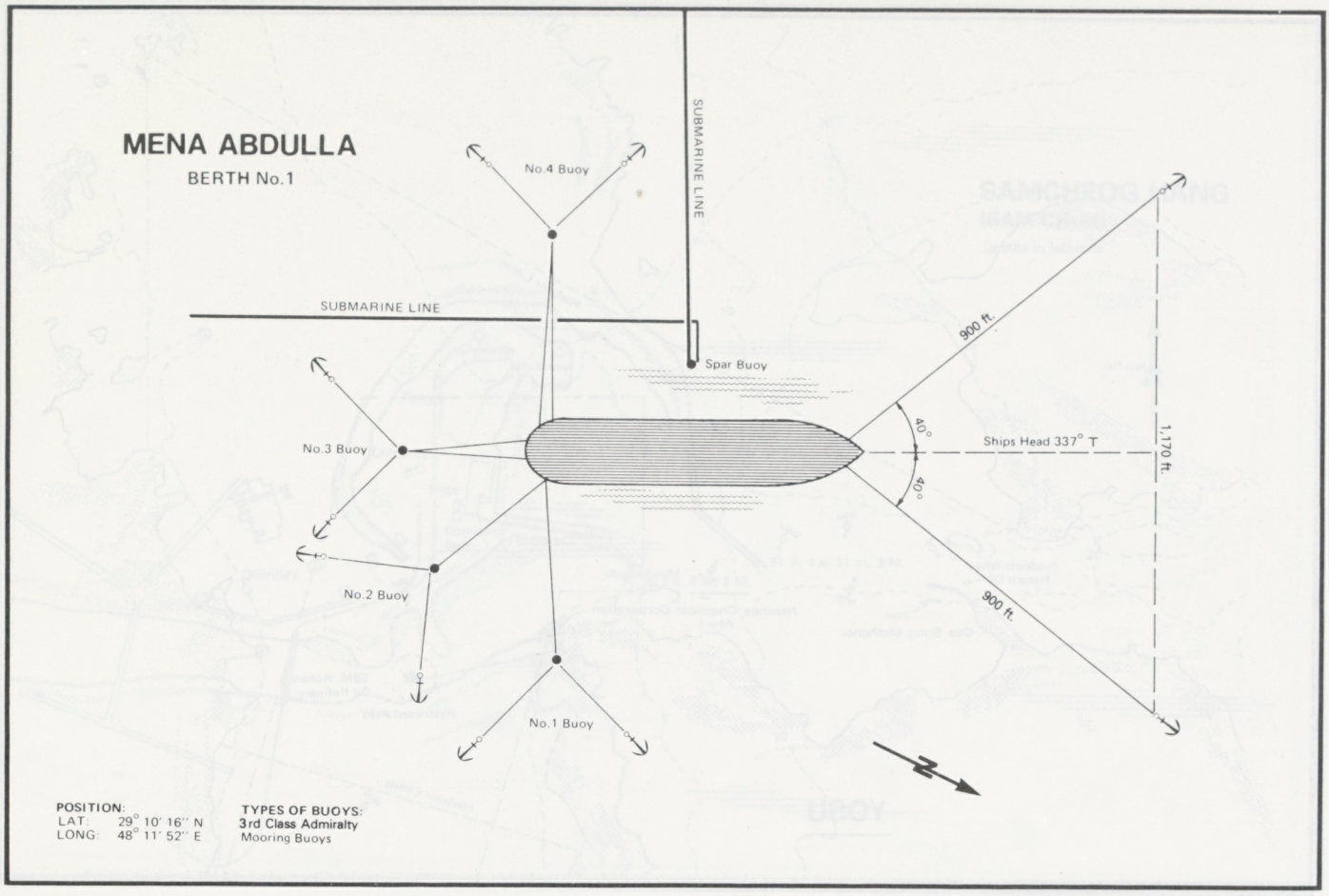
"Plan supplied by Ship's Officer"


Harbour Limits
Myo Do
Products Wharf
Hanam Oil
Pier
Dae Sung Methanol
Myodo Sudo
Namhae Chemical Corporation
Wharf
SBM, Honam
Oil Refinery
Restricted Area
YOSU
Harbour Limits


Oil
Tank
Building
(Conspic)
North Pier
Abu
Hulayfah
Pier Control
Ras al
Mangaf
Al Fuhayhil
Sand
Water Tanks
Tanks
MINA AL AHMADI
South Pier
Port Control Offices
SHUAIBA
15m
20m
ANCHORING PROHIBITED
Q.Y.
Q.Y.
Q.Y.
23m
RESTRICTED AREA
27m
Oil Loading Terminal
Dia. (2) 90 s.
Fl. 10s. 10M Horn 60 s.
SPM
Hoses
29m
27m
No.15
V.Q.(9)
Departure Channel
Fl. R. 15 s.
No. 24
MINA-AL-AHMADI
DEPTHS IN METRES

MENA ABDULLA

BERTH No.1

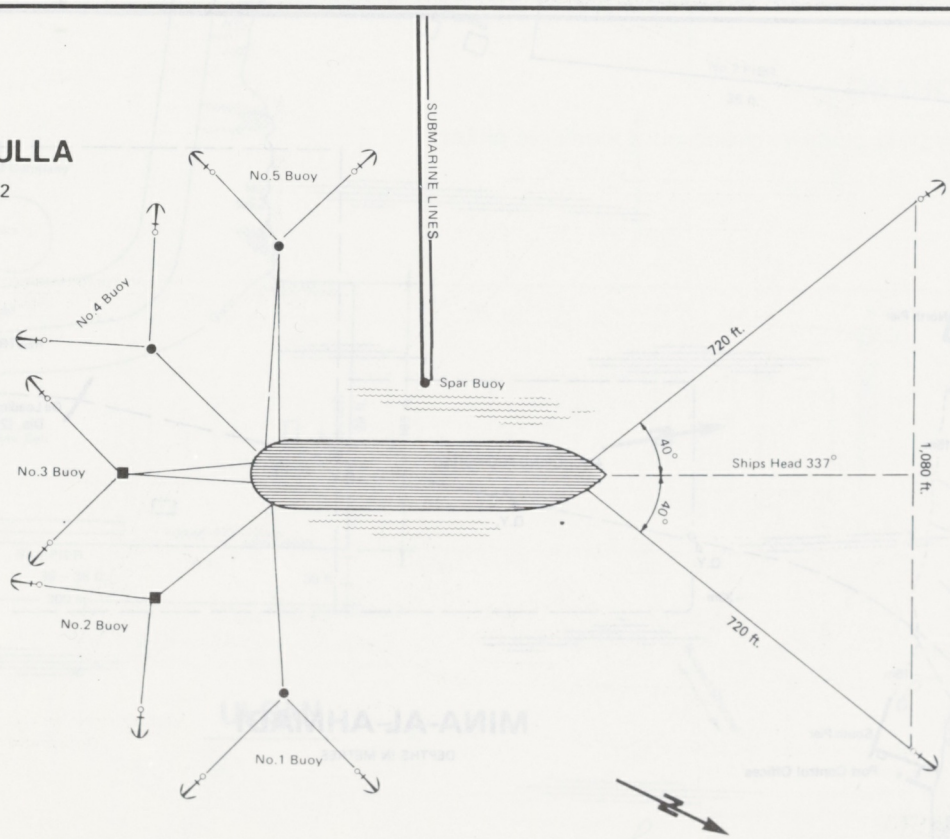


POSITION:
LAT: 29° 10' 16" N
LONG: 48° 11' 52" E

TYPES OF BUOYS:
3rd Class Admiralty
Mooring Buoys

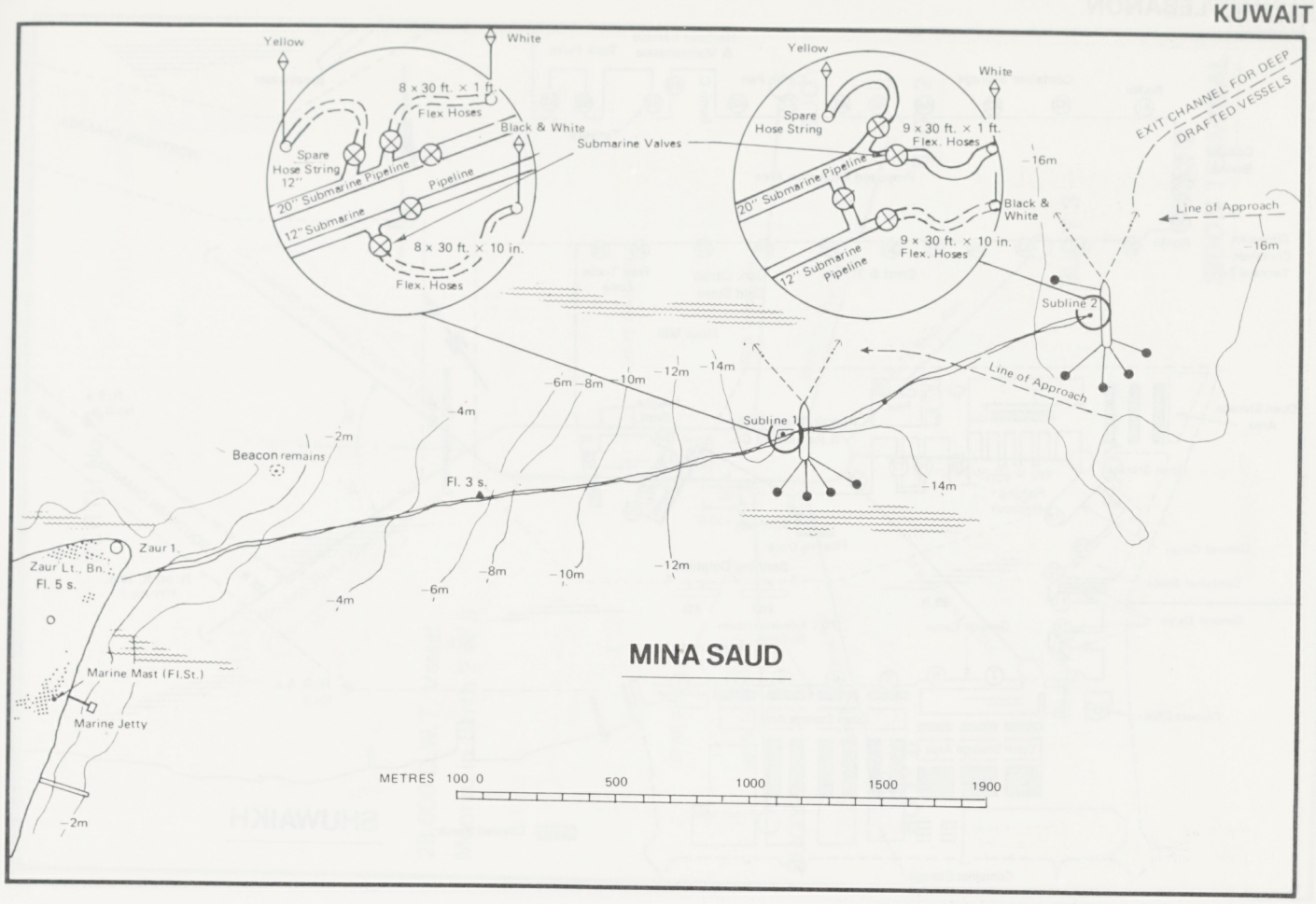
MENA ABDULLA

BERTH No.2

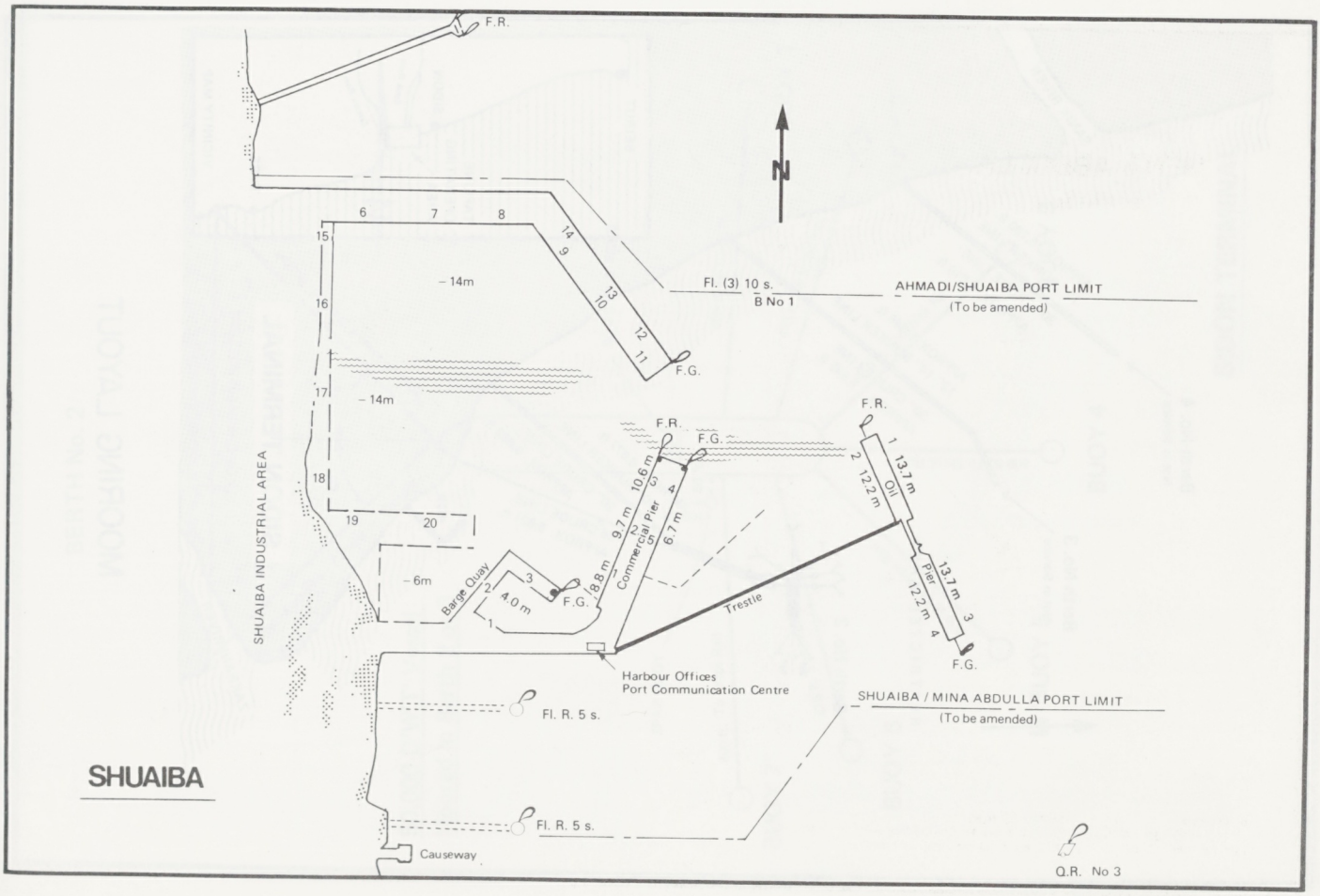


POSITION:
LAT: 29° 01' 51" N
LONG: 48° 12' 51" E

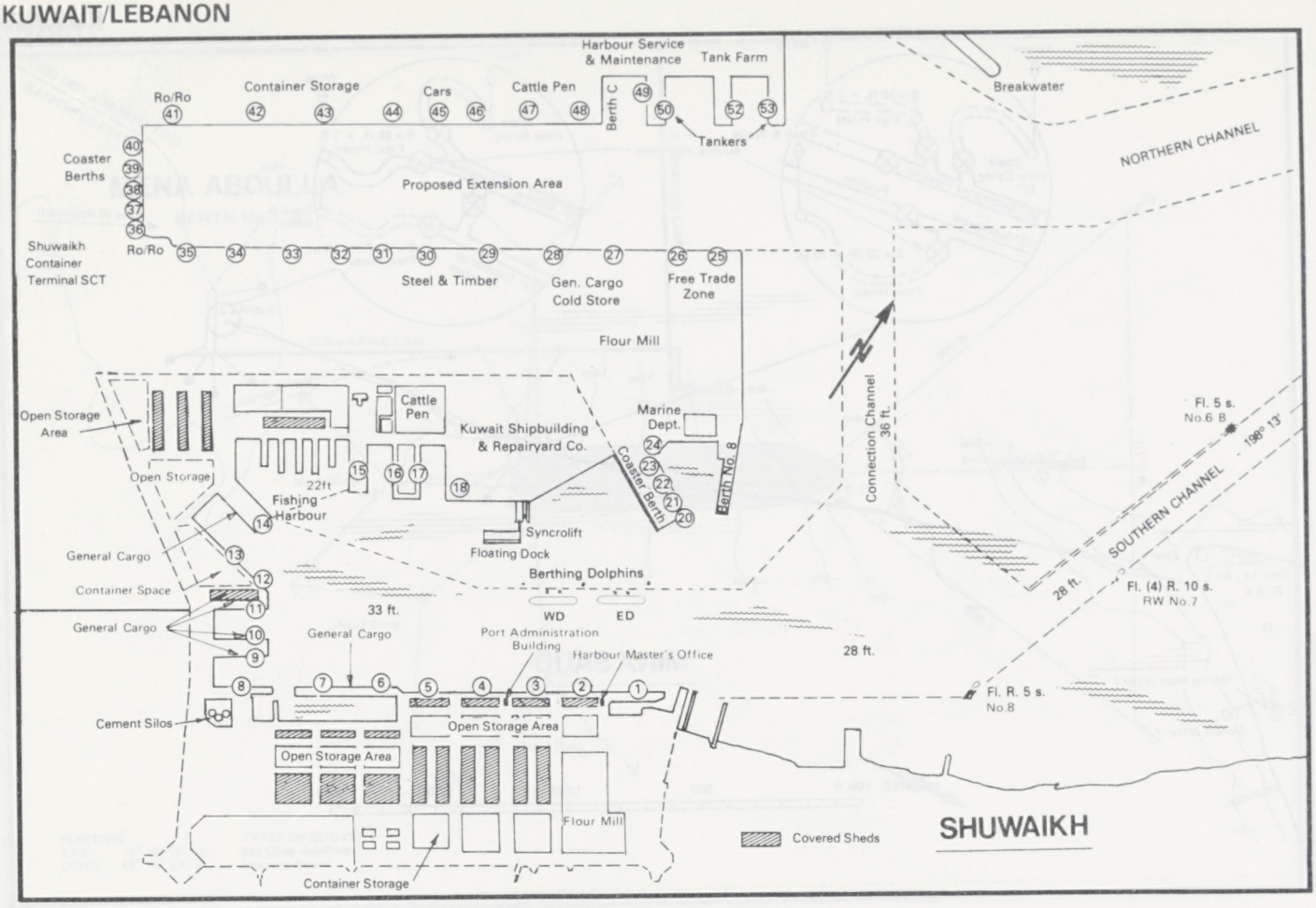
TYPES OF BUOYS:
No.1, 4, 5 Are 1st Class Admiralty Mooring Buoys
No.2 and No.3 are Lamgar Buoys

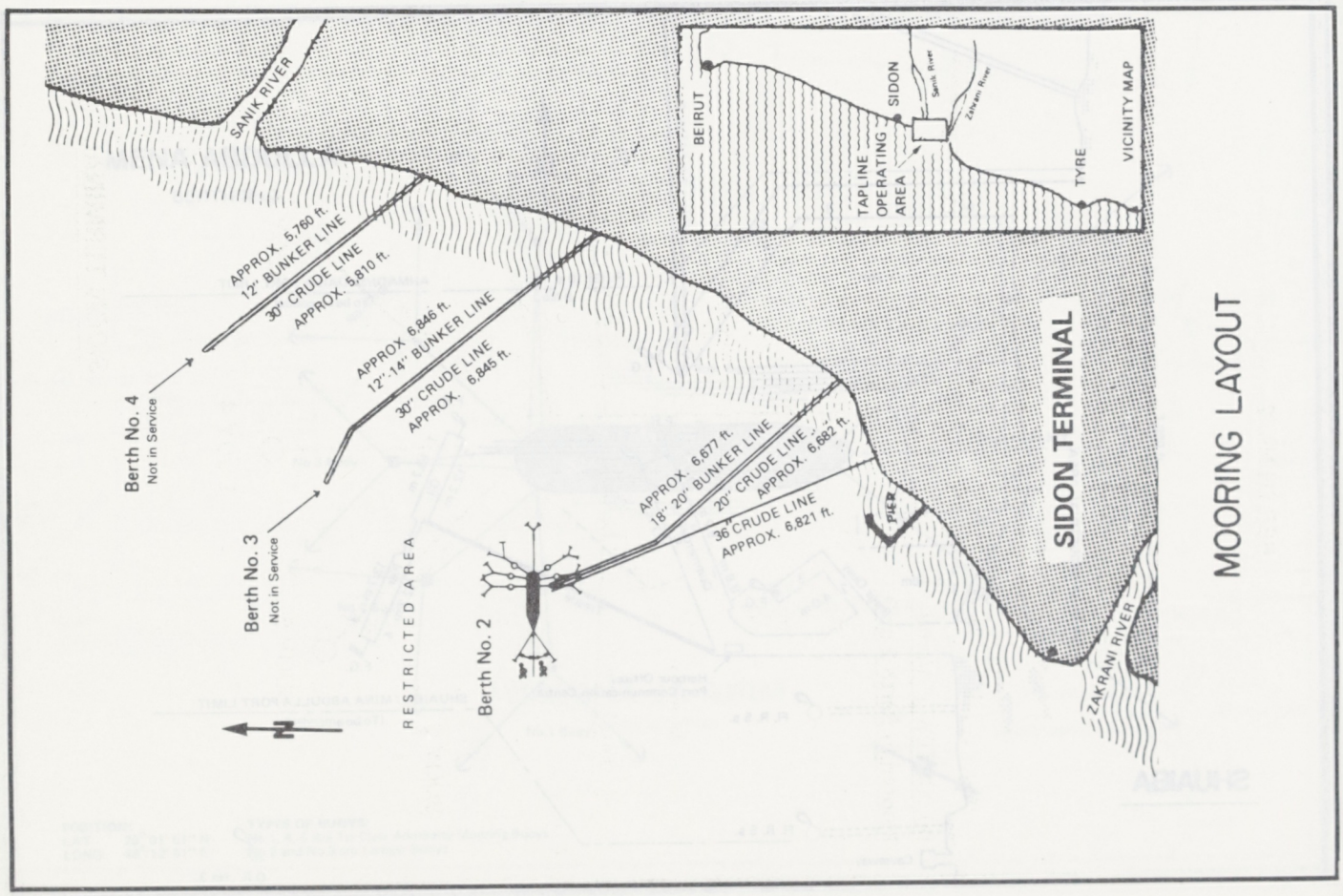


MINA SAUD

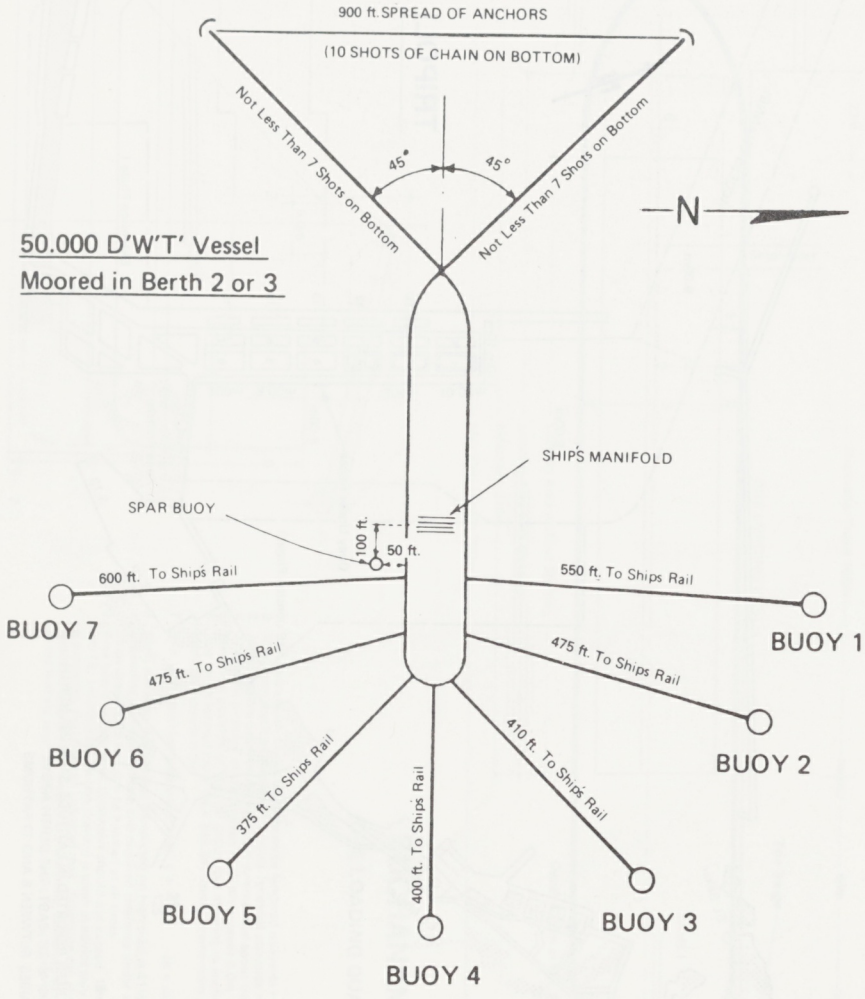


SHUAIBA


Harbour Service & Maintenance
Tank Farm
Container Storage
Cars
Cattle Pen
Berth C
Ro/Ro
Breakwater
Tankers
NORTHERN CHANNEL
Coaster Berths
Proposed Extension Area
Shuwaikh Container Terminal SCT
Ro/Ro
Steel & Timber
Gen. Cargo Cold Store
Free Trade Zone
Flour Mill
Connection Channel 36 ft.
Open Storage Area
Cattle Pen
Kuwait Shipbuilding & Repairyard Co.
Marine Dept.
Coaster Berth
Berth No. 8
Fl. 5 s. No.6 B
196° 13'
SOUTHERN CHANNEL
Open Storage
22ft
Fishing Harbour
Syncrolift
Floating Dock
General Cargo
Container Space
Berthing Dolphins
28 ft.
Fl. (4) R. 10 s. RW No.7
33 ft.
WD
ED
General Cargo
Port Administration Building
Harbour Master's Office
28 ft.
Fl. R. 5 s. No.8
Cement Silos
Open Storage Area
Open Storage Area
Flour Mill
Covered Sheds
SHUWAIKH
Container Storage


SANIK RIVER
BEIRUT
SIDON
TAPLINE OPERATING AREA
TYRE
VICINITY MAP
APPROX. 5,760 ft.
12" BUNKER LINE
30" CRUDE LINE
APPROX. 5,810 ft.
APPROX. 6,846 ft.
12"-14" BUNKER LINE
30" CRUDE LINE
APPROX. 6,845 ft.
Berth No. 4
Not in Service
Berth No. 3
Not in Service
RESTRICTED AREA
Berth No. 2
APPROX. 6,677 ft.
18"-20" BUNKER LINE
20" CRUDE LINE
APPROX. 6,682 ft.
36" CRUDE LINE
APPROX. 6,821 ft.
PIER
SIDON TERMINAL
MOORING LAYOUT
ZAKRANI RIVER

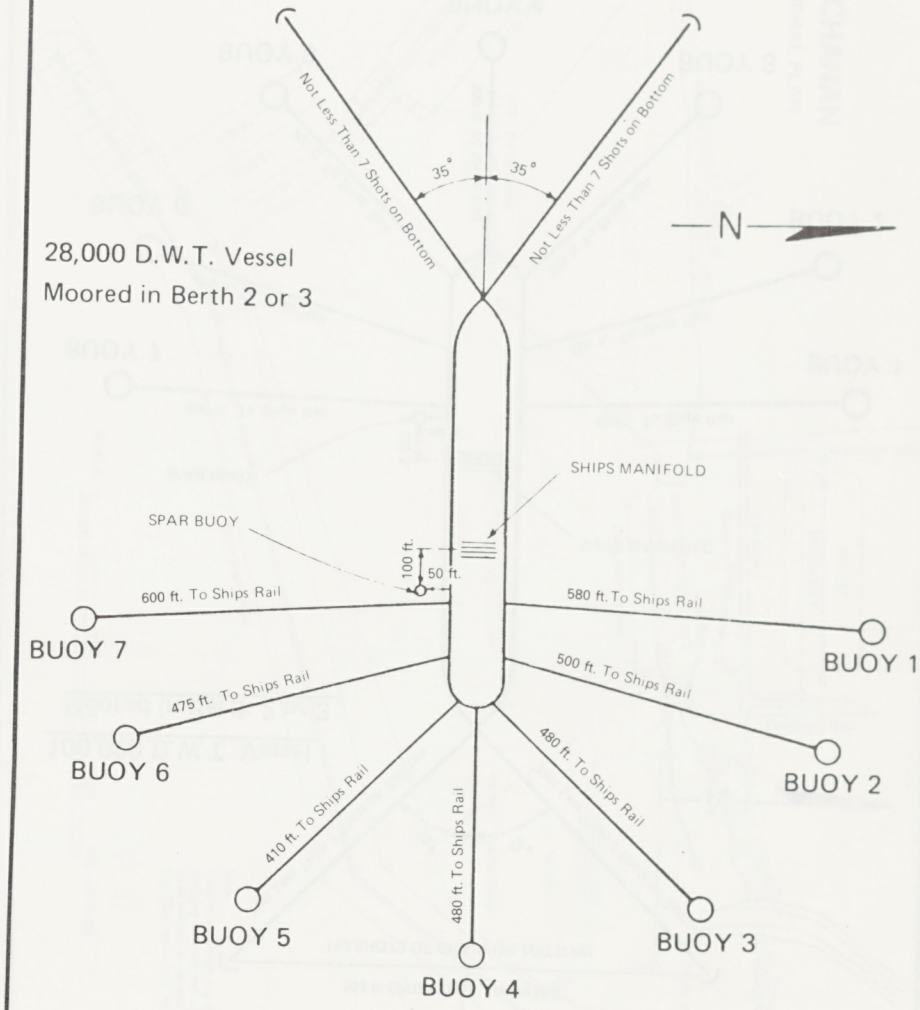
BERTH No. 2



50.000 D'W'T' Vessel
Moored in Berth 2 or 3

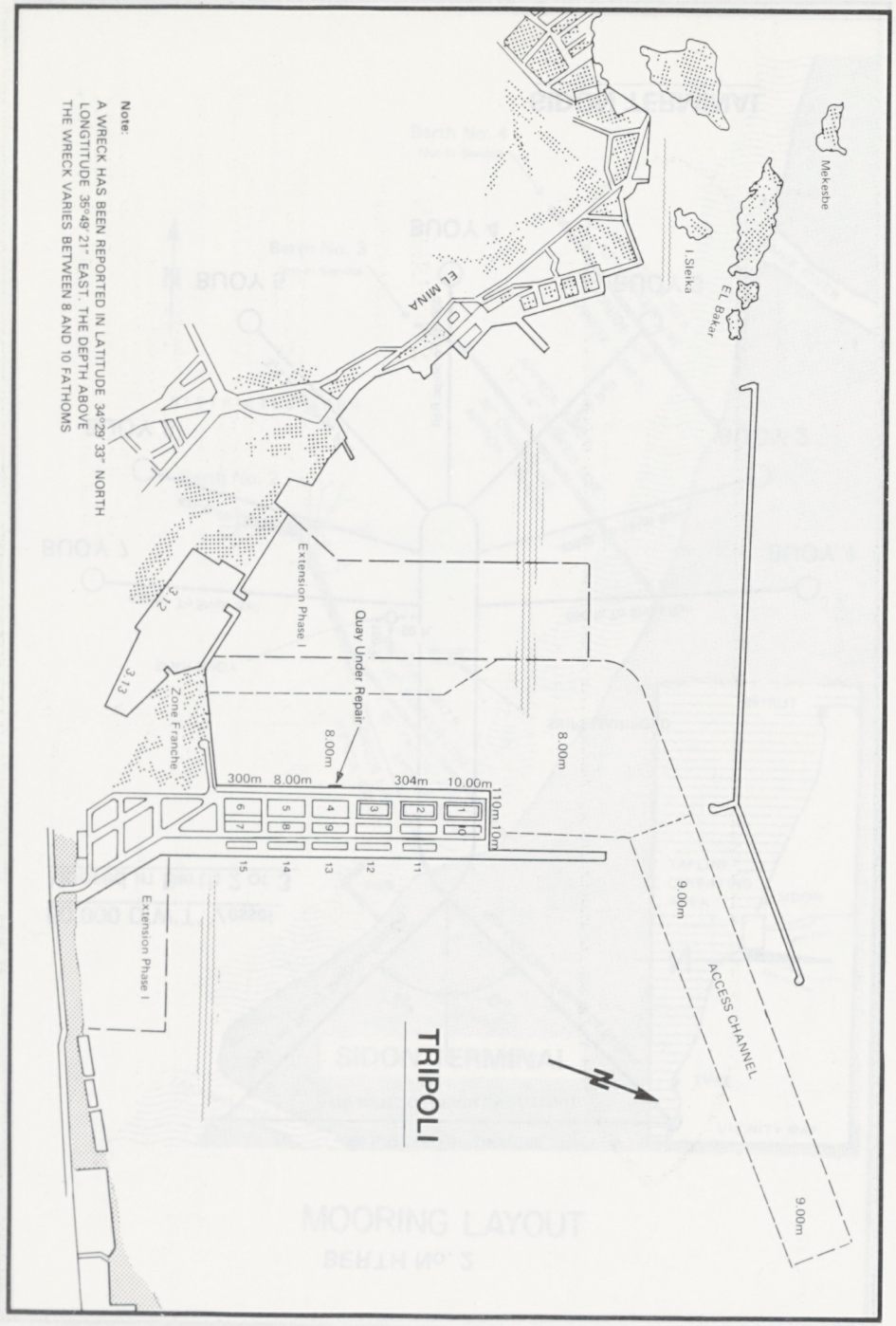
SIDON TERMINAL

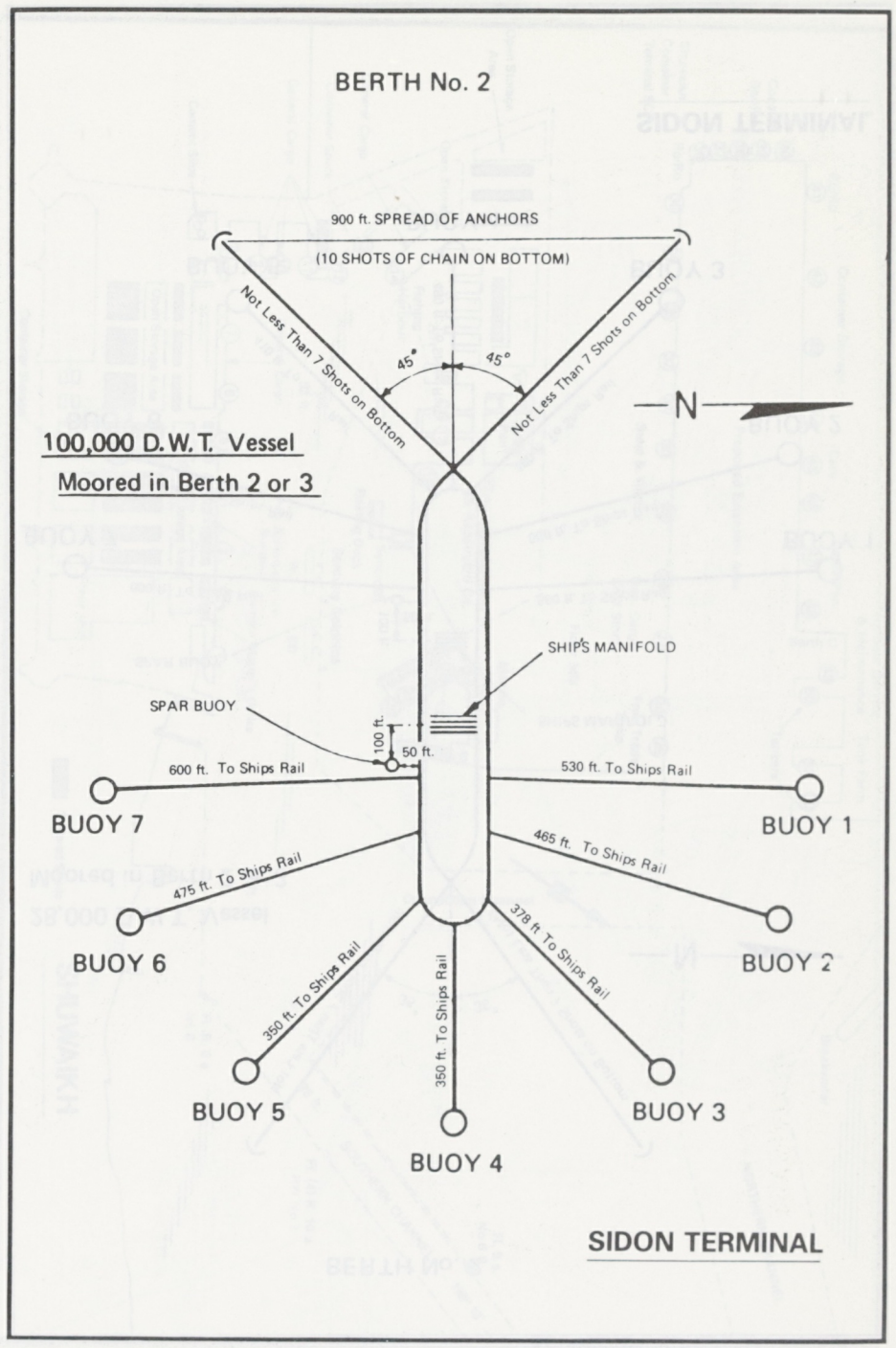
BERTH No. 2

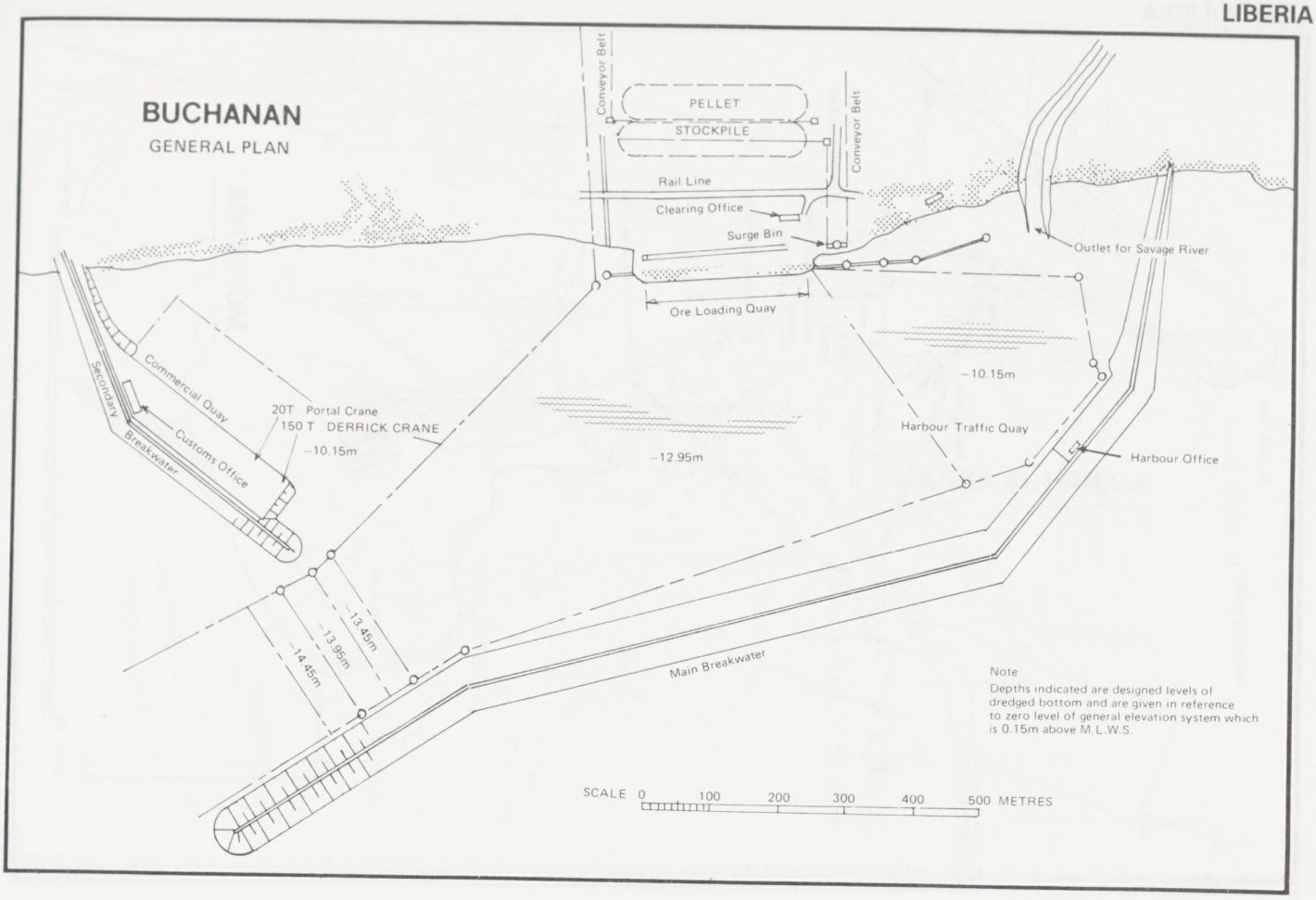


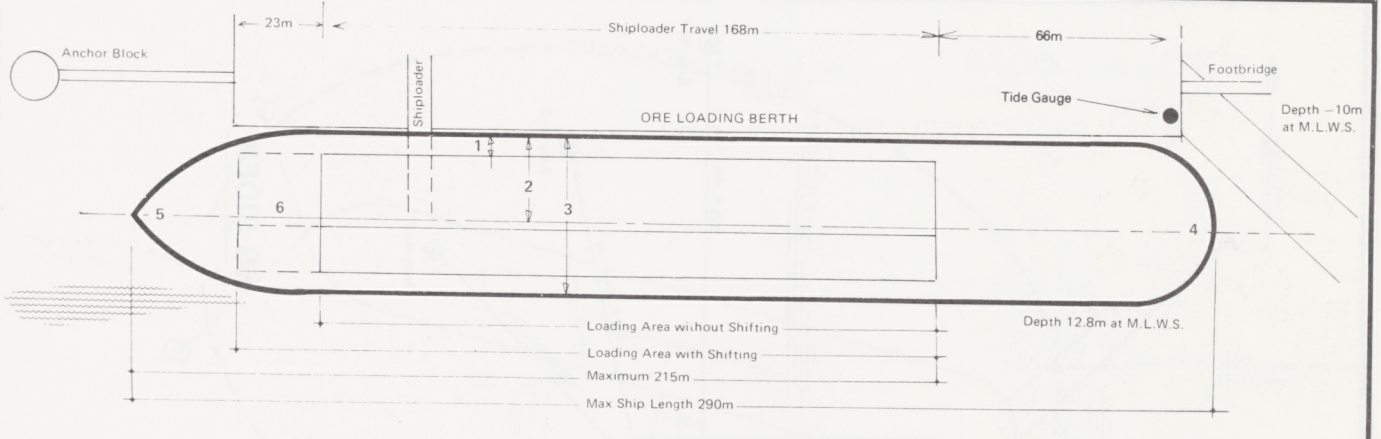
28,000 D.W.T. Vessel
Moored in Berth 2 or 3

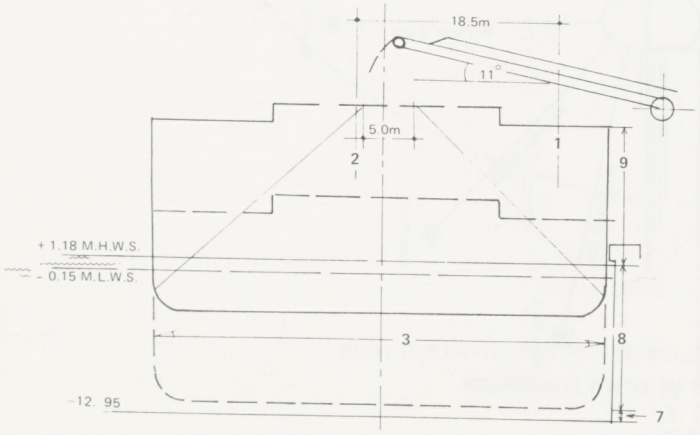
SIDON TERMINAL


Note:
A WRECK HAS BEEN REPORTED IN LATITUDE 34°29' 33" NORTH
LONGITUDE 35°49' 21" EAST. THE DEPTH ABOVE
THE WRECK VARIES BETWEEN 8 AND 10 FATHOMS
Mekebe
I Sleika
EL BAKkar
EL MINA
Extension Phase I
Quay Under Repair
Zone Franche
8.00m
300m
304m
10.00m
110m
9.00m
ACCESS CHANNEL
TRIPOLI


BERTH No. 2
900 ft. SPREAD OF ANCHORS
(10 SHOTS OF CHAIN ON BOTTOM)
Not Less Than 7 Shots on Bottom
45°
45°
Not Less Than 7 Shots on Bottom
N
100,000 D.W.T. Vessel
Moored in Berth 2 or 3
SHIP'S MANIFOLD
SPAR BUOY
100 ft.
50 ft.
600 ft. To Ships Rail
530 ft. To Ships Rail
BUOY 7
BUOY 1
475 ft. To Ships Rail
465 ft. To Ships Rail
BUOY 6
BUOY 2
350 ft. To Ships Rail
350 ft. To Ships Rail
378 ft. To Ships Rail
BUOY 5
BUOY 4
BUOY 3
SIDON TERMINAL





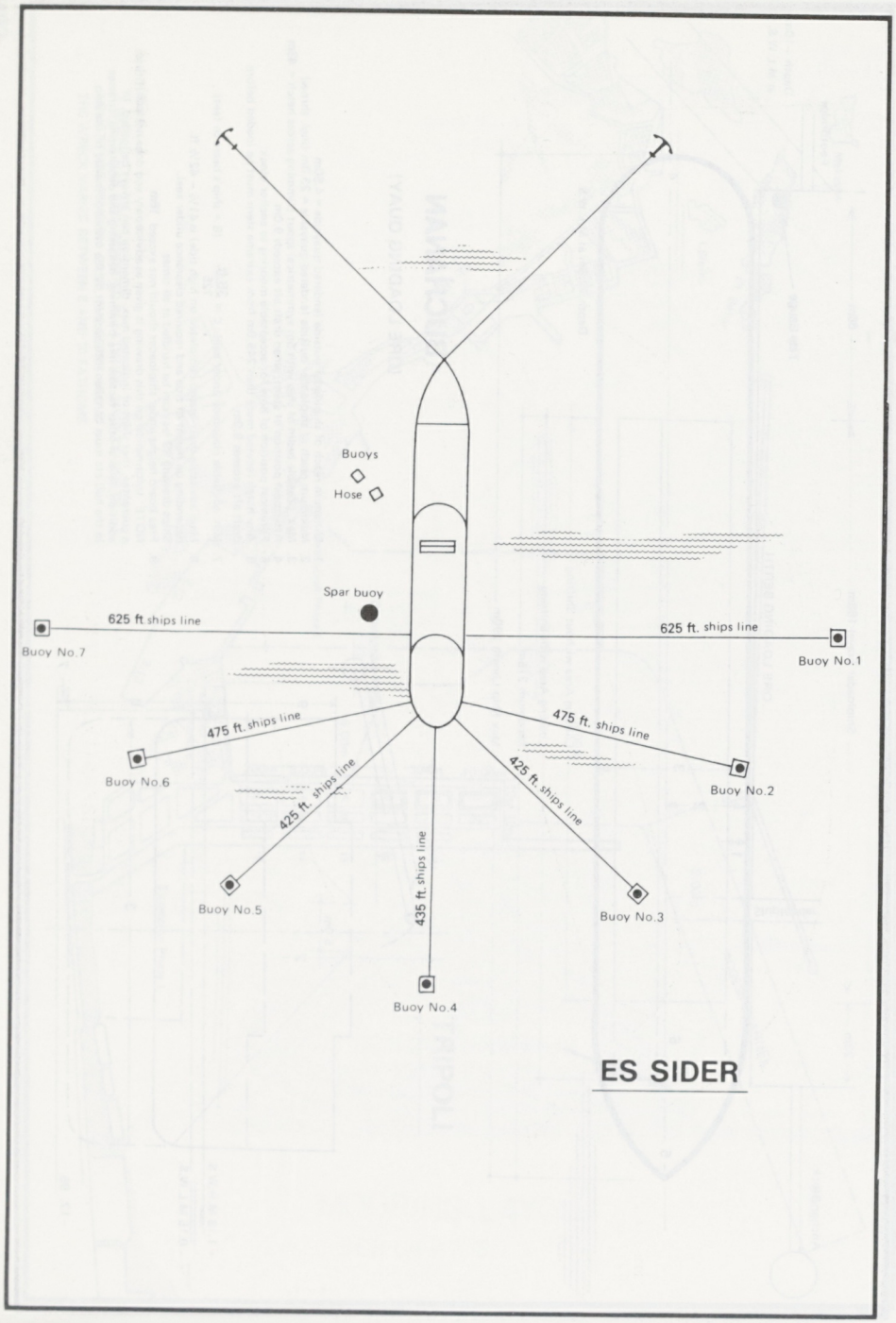


BUCHANAN

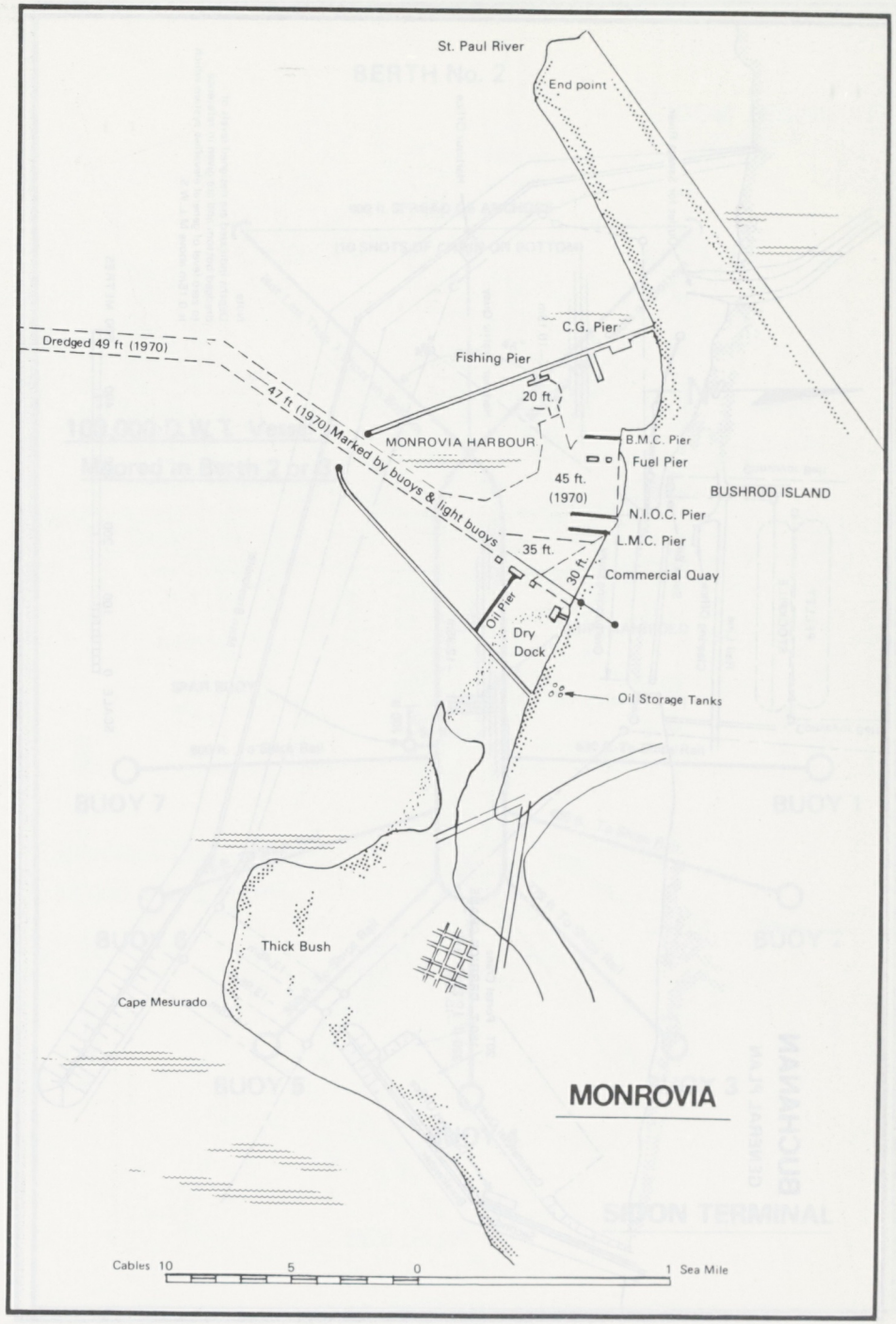
(ORE LOADING QUAY)

1. Minimum reach of shiploader outside fendered quayside = 4.50m
2. Maximum reach of shiploader outside fendered quayside = 23.0m (incl. throw)
3. Max. possible beam of ship with 5m symmetrical spout trimming across hatch = **43m**
4. Aftermost position of stern, when draft aft exceeds 9.0m
5. Foremost position of bow for acceptable mooring to anchor block
6. Any hatch located more than 245.0m from extreme stern must be loaded before draft aft exceeds 9.0m
7. Min. advisable clearance under keel: $c = \frac{3B \text{ ft.}}{125}$ (B = ship's beam in feet)
8. Max. advisable draft (cargo completed on high tide) is 41½ – 42½ ft. depending on height of tide and required clearance under keel. Ships drawing 39 feet can be handled at all times
9. Free board height under shiploader should not exceed **15m**

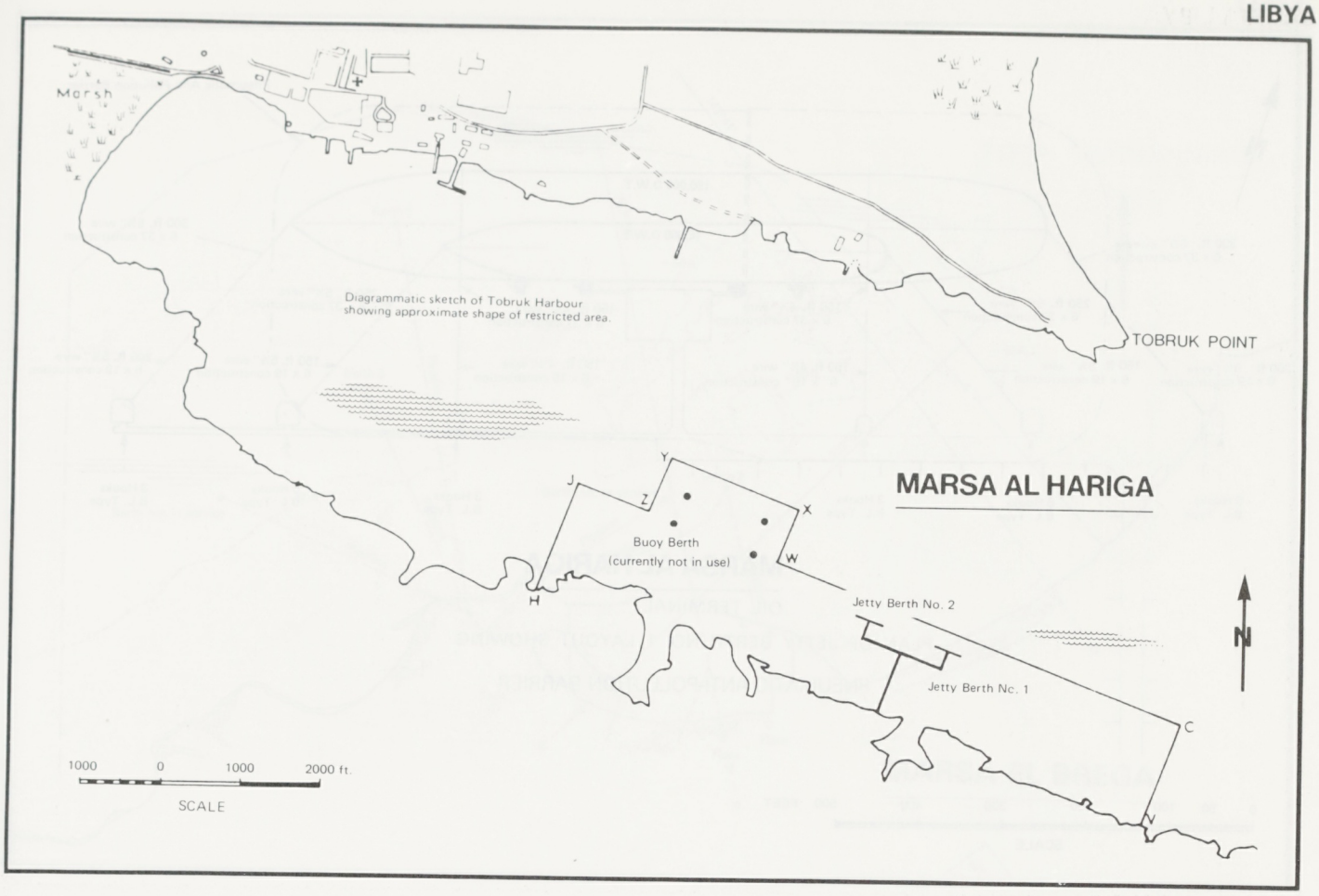
NOTE: Information on this drawing is given as advice only and does not constitute a guarantee, that ships of indicated max. dimension can always be loaded. In addition, several other factors like trimming, ballasting and deballasting, stresses in the hull etc must be taken into account by the owner or master of the ship.

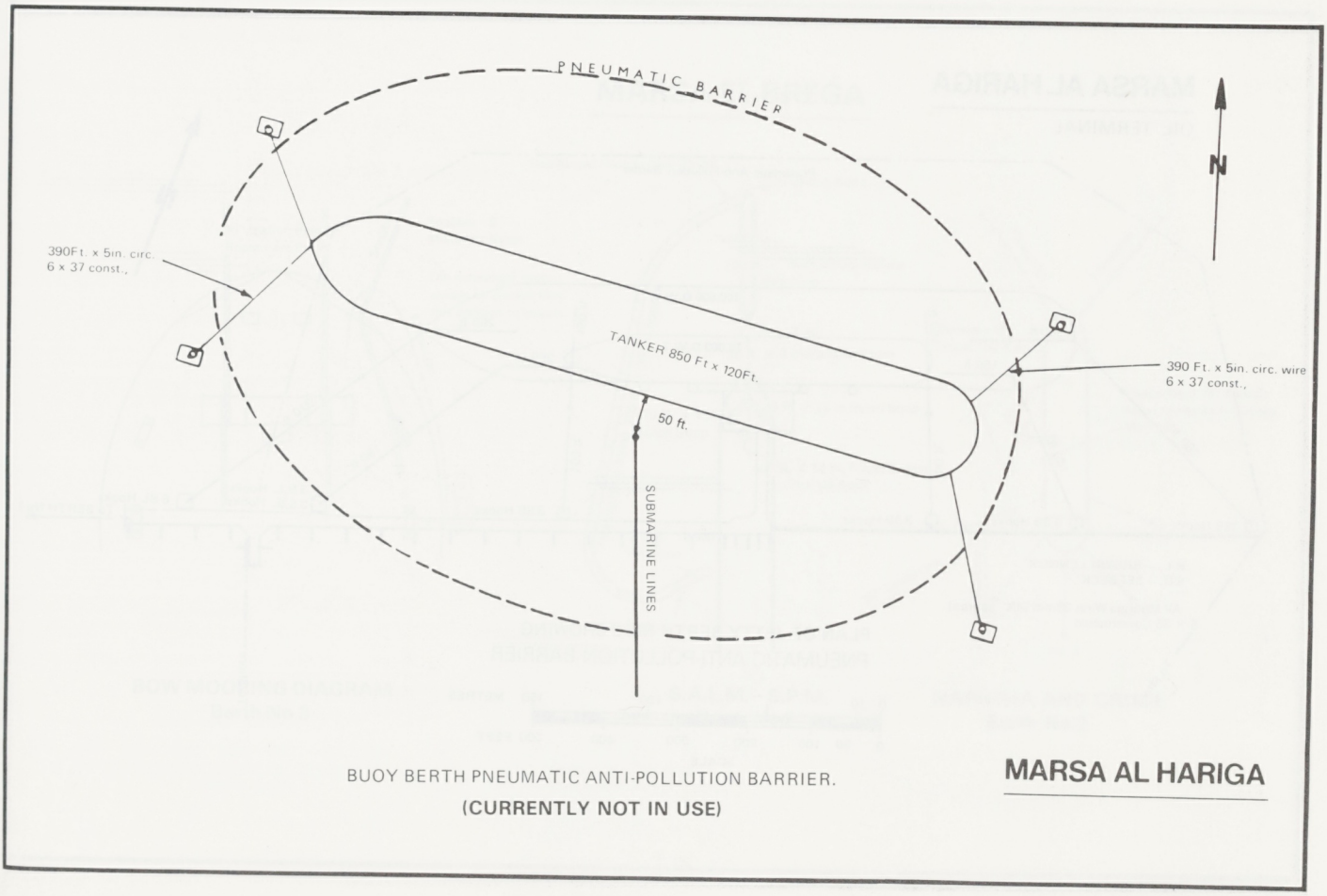


ES SIDER



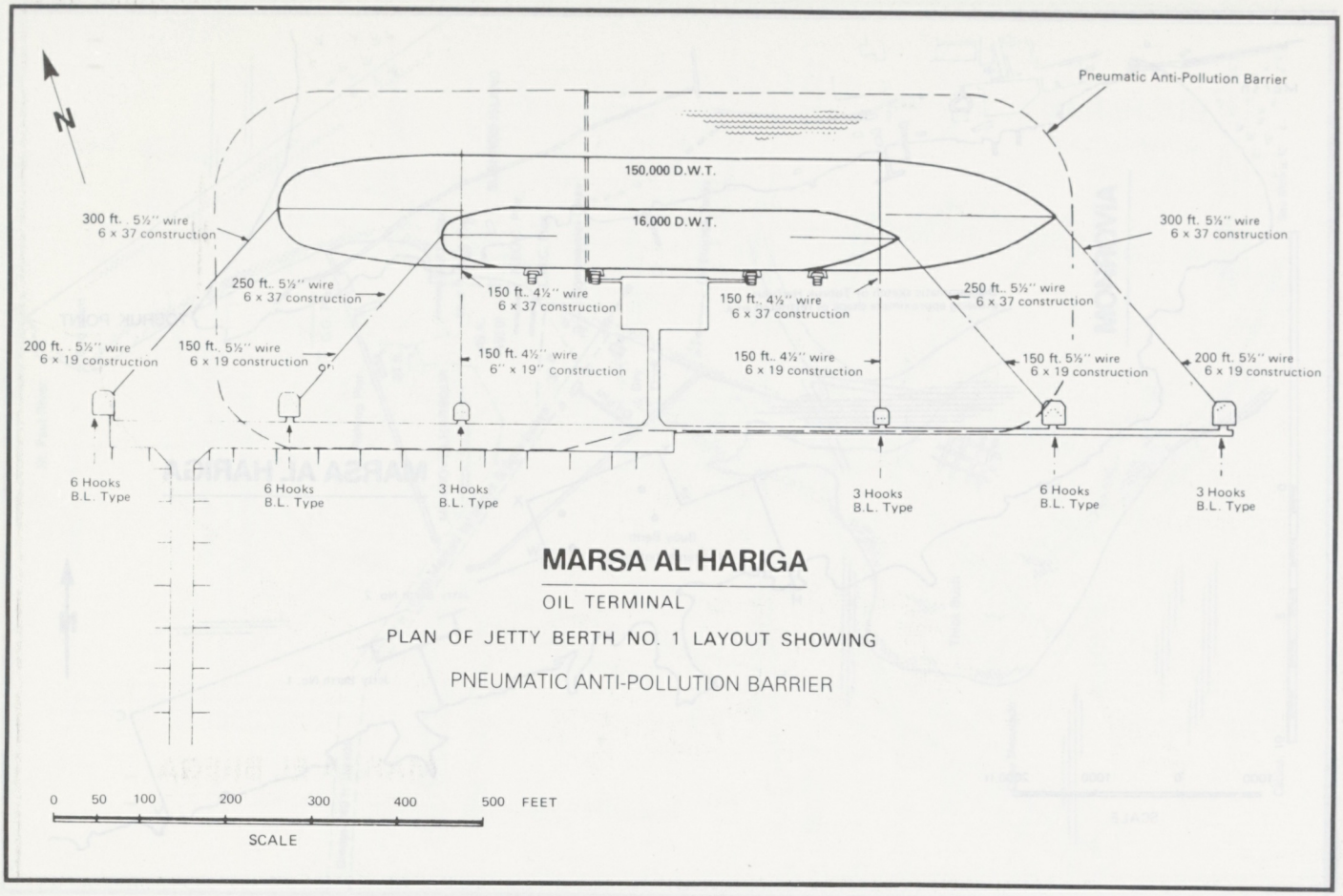
MONROVIA

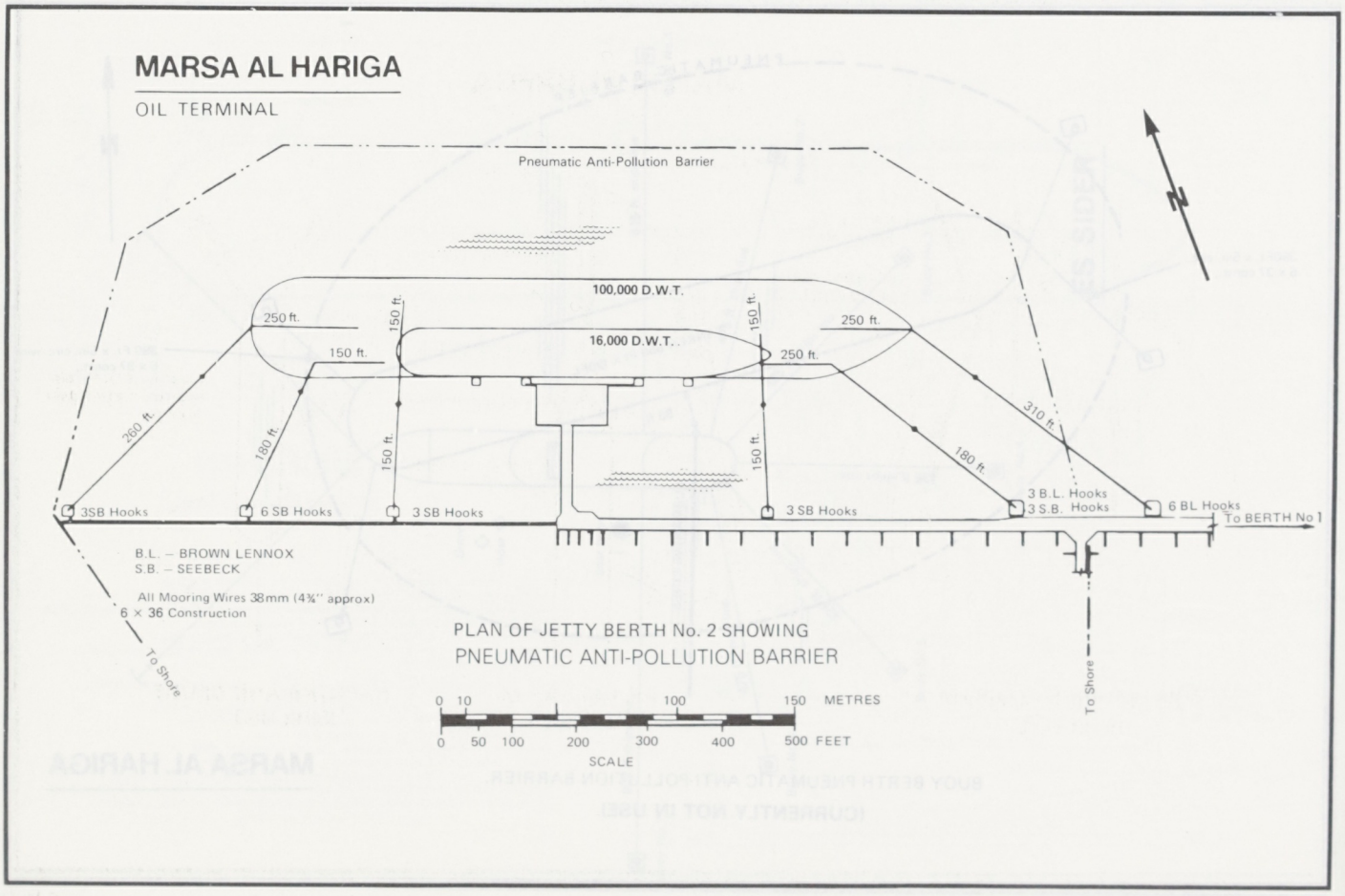


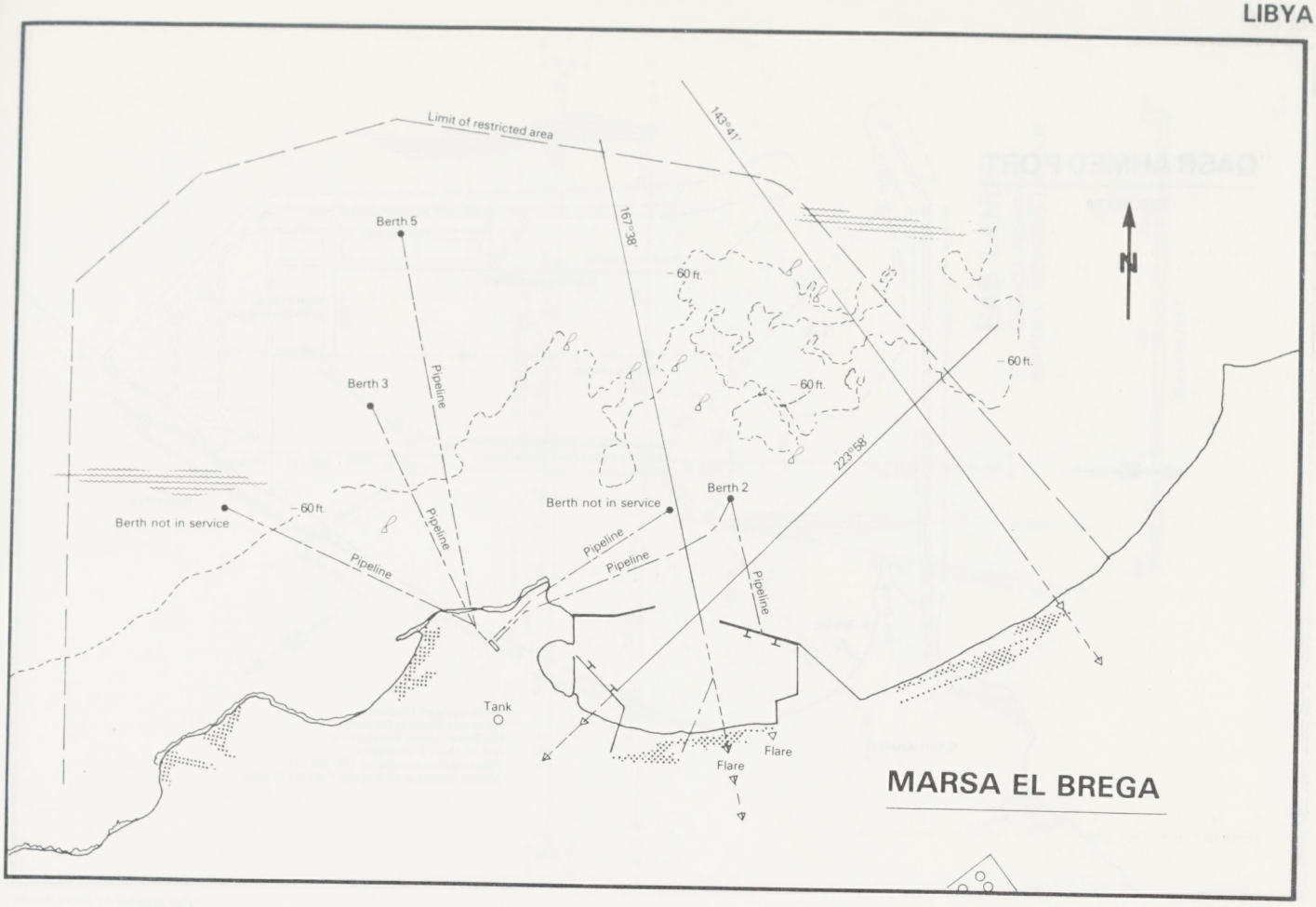


BUOY BERTH PNEUMATIC ANTI-POLLUTION BARRIER.
(CURRENTLY NOT IN USE)

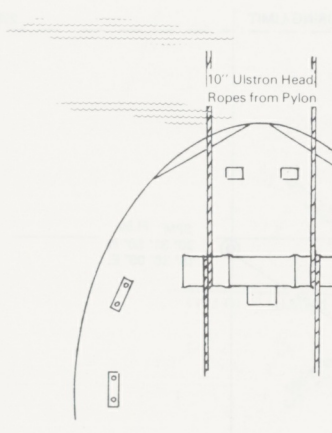
MARSA AL HARIGA


N
Pneumatic Anti-Pollution Barrier
150,000 D.W.T.
16,000 D.W.T.
300 ft. . 5½" wire 6 x 37 construction
300 ft. 5½" wire 6 x 37 construction
250 ft.. 5½" wire 6 x 37 construction
250 ft.. 5½" wire 6 x 37 construction
150 ft.. 4½" wire 6 x 37 construction
150 ft.. 4½" wire 6 x 37 construction
200 ft. . 5½" wire 6 x 19 construction
150 ft.. 5½" wire 6 x 19 construction
150 ft. 4½" wire 6" x 19" construction
150 ft.. 4½" wire 6 x 19 construction
150 ft. 5½" wire 6 x 19 construction
200 ft. 5½" wire 6 x 19 construction
6 Hooks B.L. Type
6 Hooks B.L. Type
3 Hooks B.L. Type
3 Hooks B.L. Type
6 Hooks B.L. Type
3 Hooks B.L. Type
MARSA AL HARIGA
OIL TERMINAL
PLAN OF JETTY BERTH NO. 1 LAYOUT SHOWING
PNEUMATIC ANTI-POLLUTION BARRIER
0 50 100 200 300 400 500 FEET
SCALE

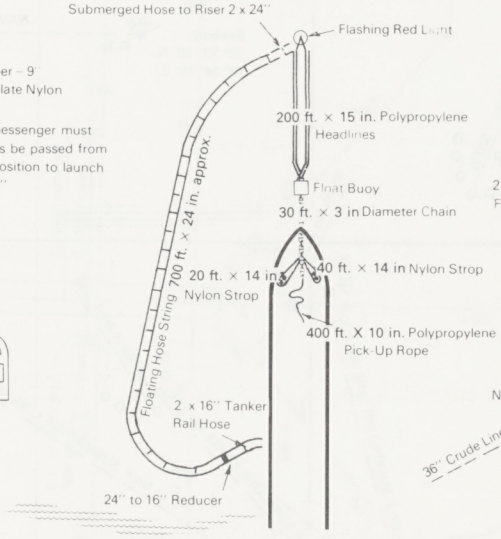

MARSA AL HARIGA
OIL TERMINAL
Pneumatic Anti-Pollution Barrier
N
100,000 D.W.T.
16,000 D.W.T.
250 ft.
150 ft.
150 ft.
150 ft.
250 ft.
250 ft.
260 ft.
180 ft.
150 ft.
150 ft.
180 ft.
310 ft.
3SB Hooks
6 SB Hooks
3 SB Hooks
3 SB Hooks
3 B.L. Hooks
3 S.B. Hooks
6 BL Hooks
To BERTH No 1
B.L. – BROWN LENNOX
S.B. – SEEBECK
All Mooring Wires 38mm (4¾" approx)
6 x 36 Construction
To Shore
To Shore
PLAN OF JETTY BERTH No. 2 SHOWING
PNEUMATIC ANTI-POLLUTION BARRIER
0 10 100 150 METRES
0 50 100 200 300 400 500 FEET
SCALE



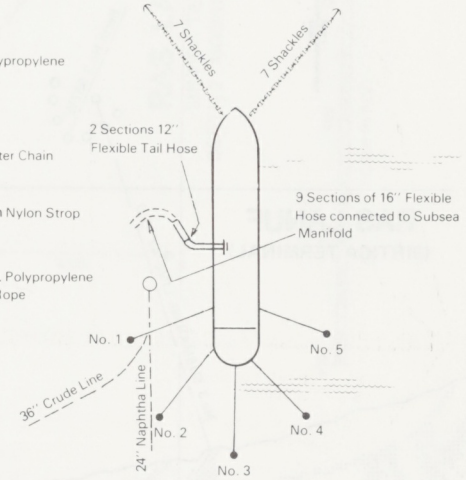
MARSA EL BREGA



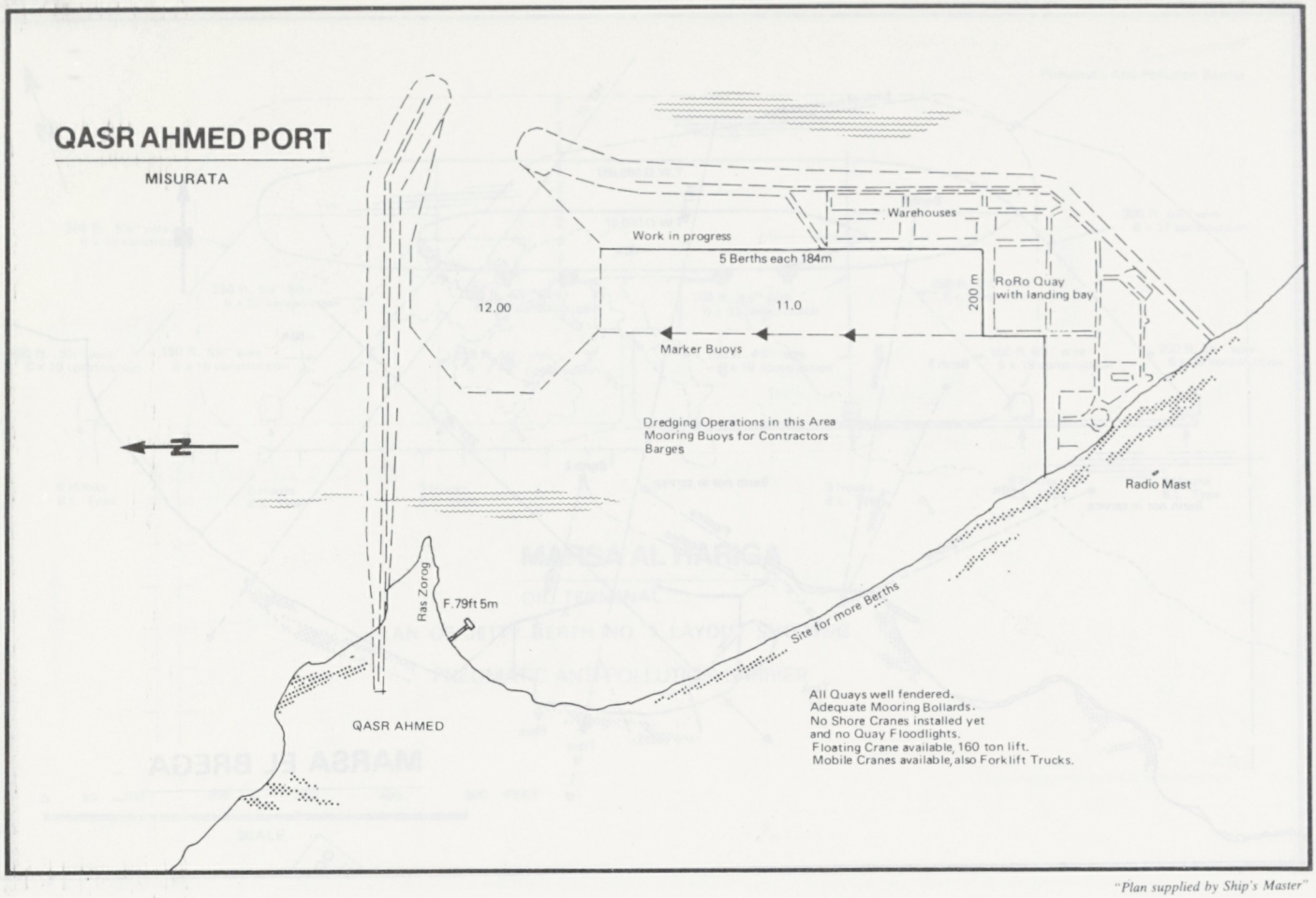
BOW MOORING DIAGRAM
Berth No.3



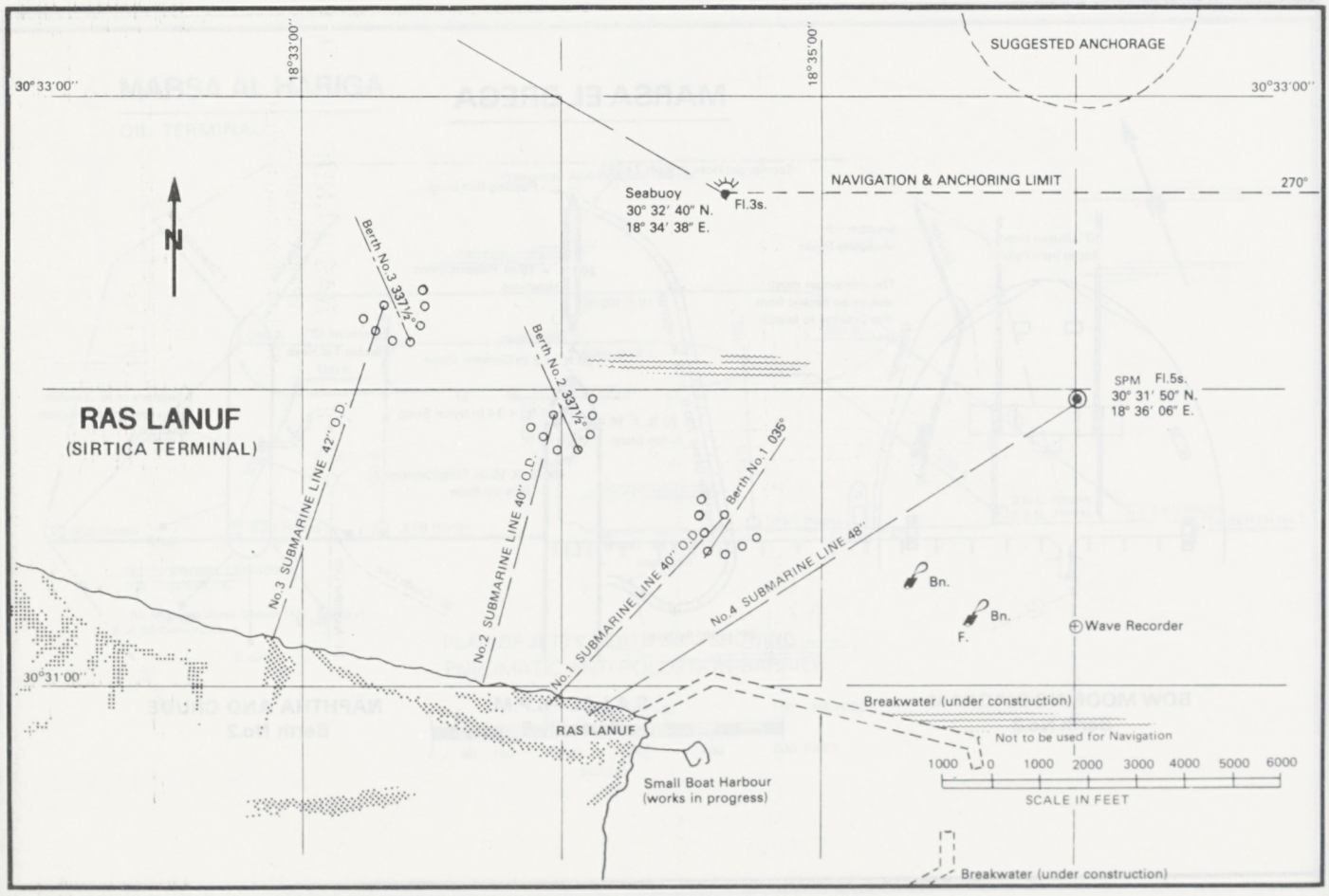
S.A.L.M. – S.P.M.
Berth No.5

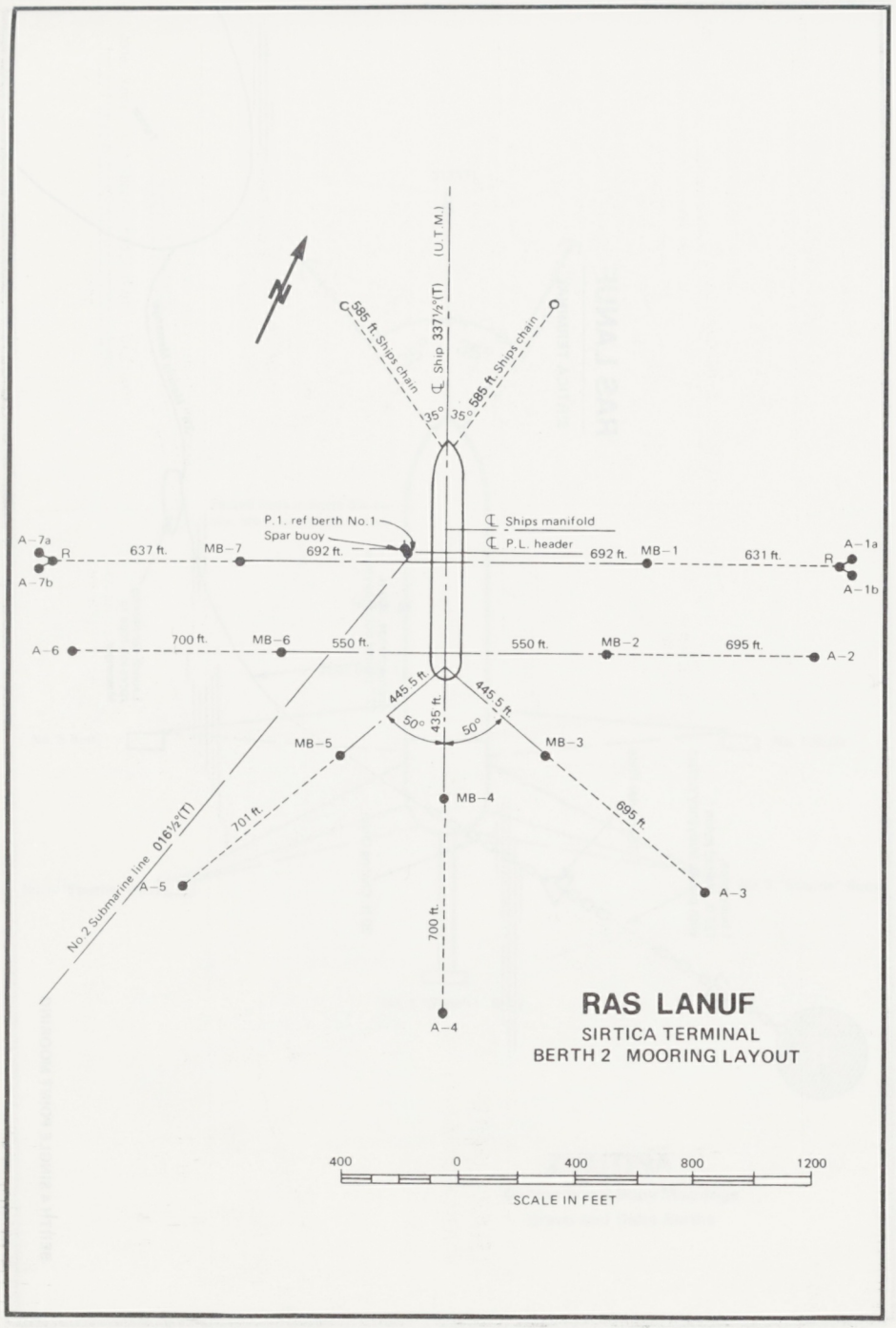


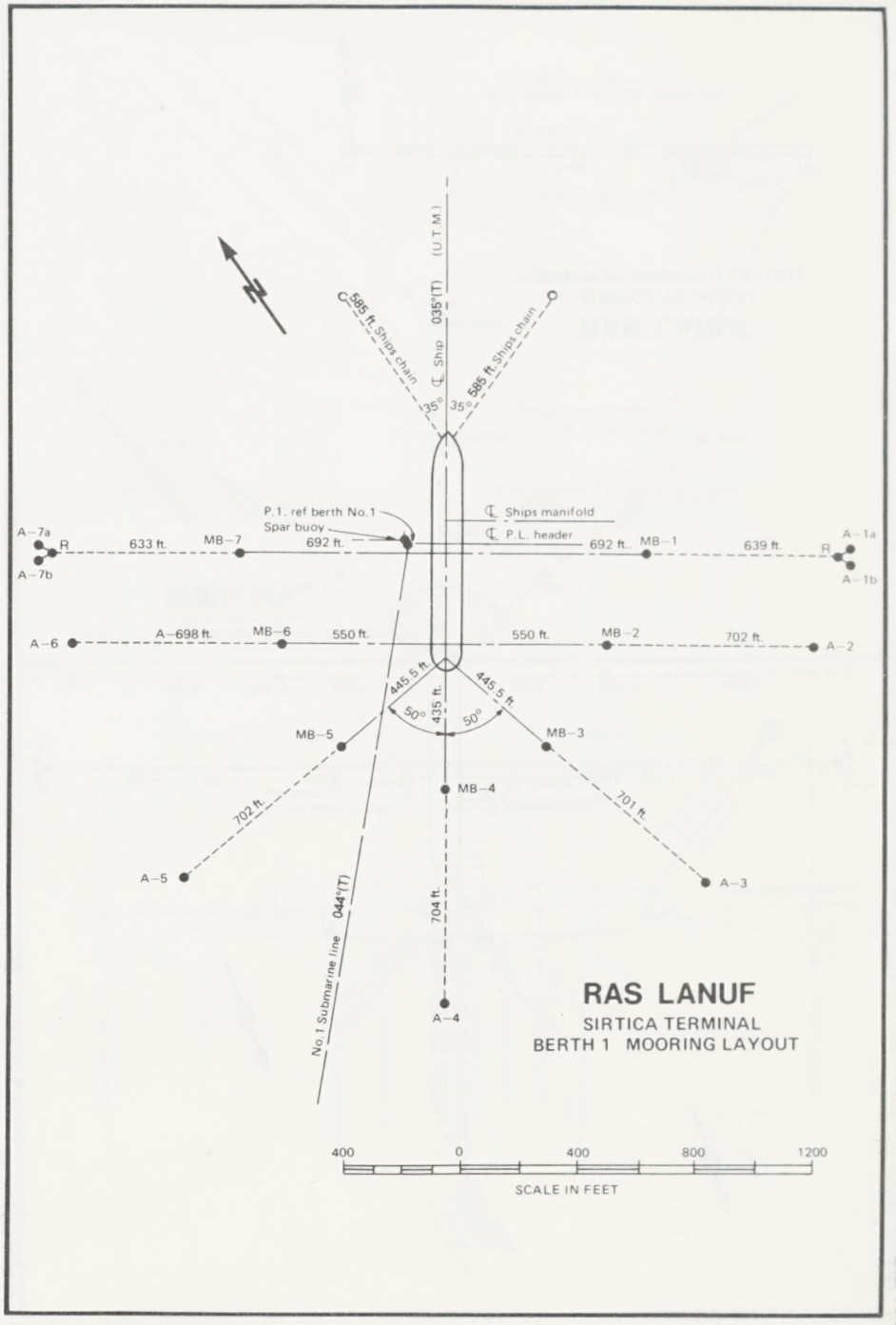
NAPHTHA AND CRUDE
Berth No.2

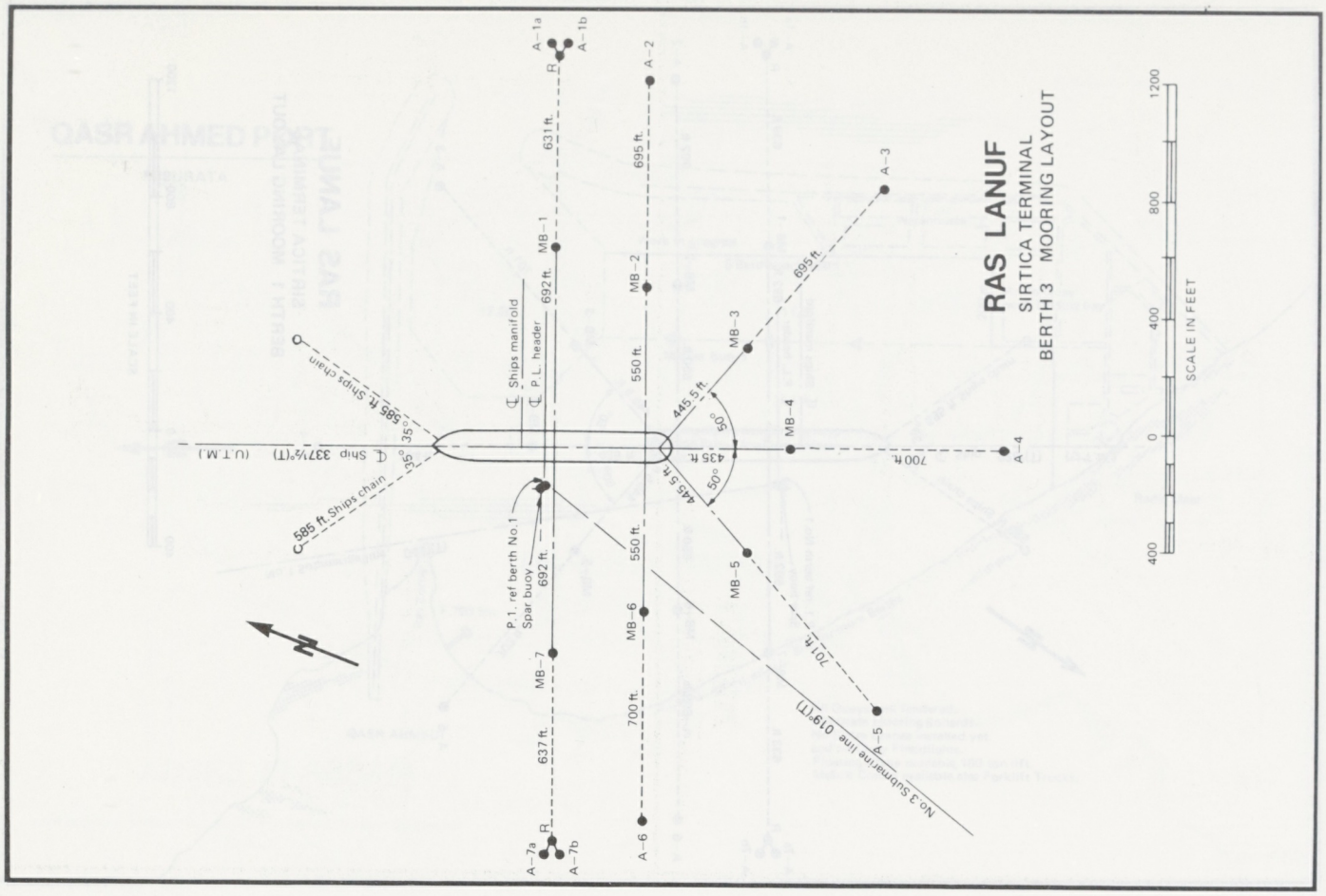


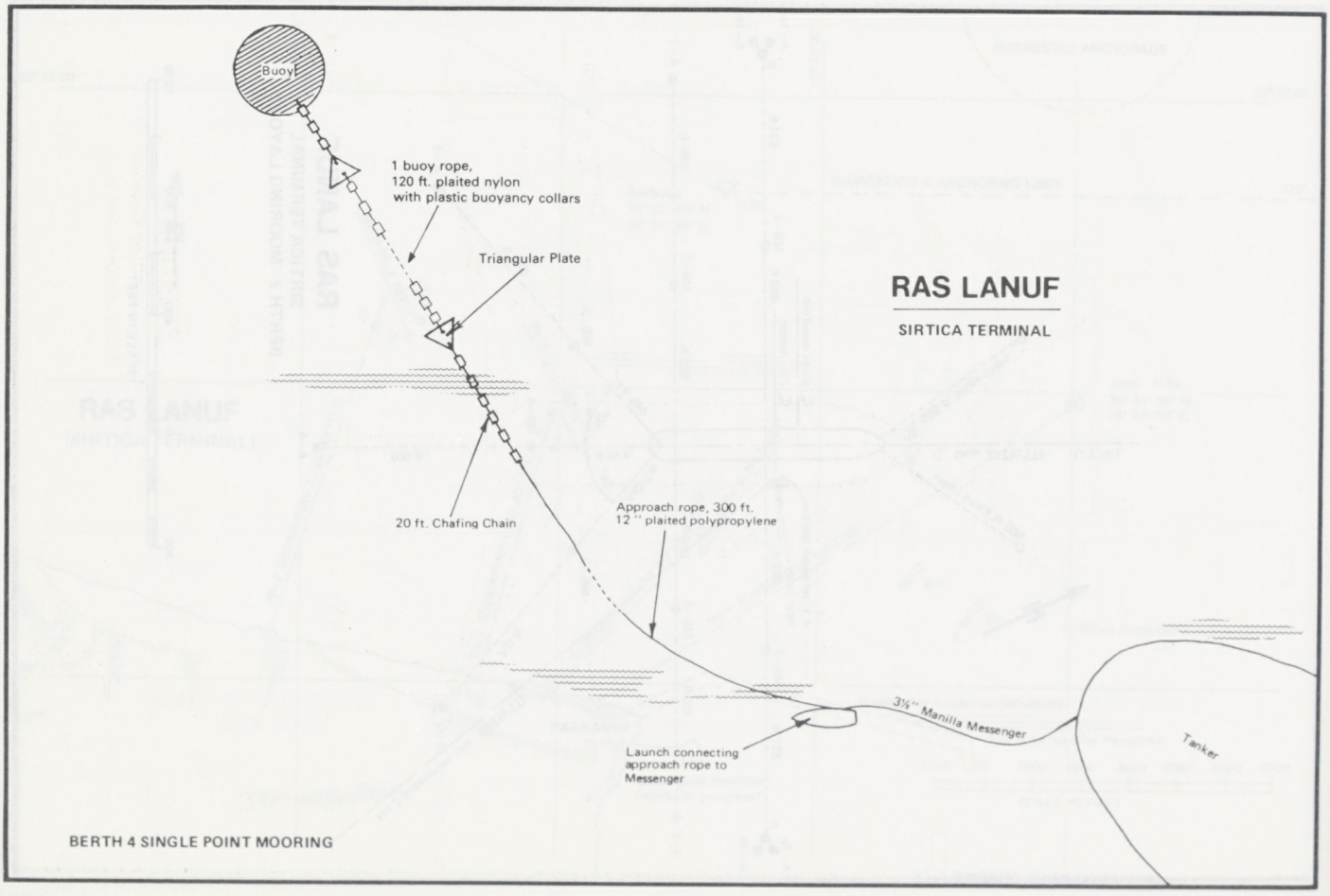
"Plan supplied by Ship's Master"

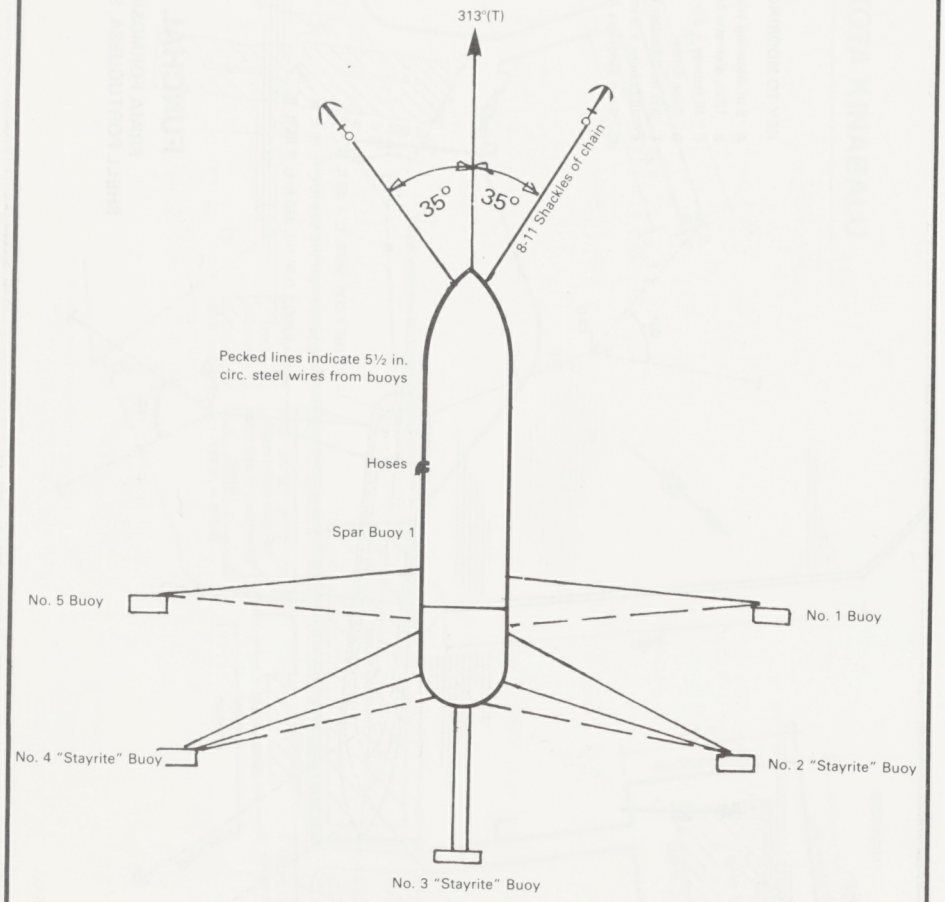



N
(U.T.M.)
℄ Ship 337½°(T)
585 ft. Ships chain
585 ft. Ships chain
35°
35°
P.1. ref berth No.1
Spar buoy
℄ Ships manifold
℄ P.L. header
A–7a
A–7b
R
637 ft.
MB–7
692 ft.
692 ft.
MB–1
631 ft.
R
A–1a
A–1b
A–6
700 ft.
MB–6
550 ft.
550 ft.
MB–2
695 ft.
A–2
445.5 ft.
445.5 ft.
50°
50°
435 ft.
MB–5
MB–3
MB–4
701 ft.
695 ft.
No.2 Submarine line 016½°(T)
A–5
A–3
700 ft.
A–4
RAS LANUF
SIRTICA TERMINAL
BERTH 2 MOORING LAYOUT
400
0
400
800
1200
SCALE IN FEET


N
(U.T.M.)
℄ Ship 035°(T)
585 ft. Ships chain
585 ft. Ships chain
35°
35°
P.1. ref berth No.1
Spar buoy
℄ Ships manifold
℄ P.L. header
A–7a
A–7b
R
633 ft.
MB–7
692 ft.
692 ft.
MB–1
639 ft.
R
A–1a
A–1b
A–6
A–698 ft.
MB–6
550 ft.
550 ft.
MB–2
702 ft.
A–2
445.5 ft.
445.5 ft.
50°
50°
435 ft.
MB–5
MB–3
MB–4
702 ft.
701 ft.
No.1 Submarine line 044°(T)
A–5
A–3
704 ft.
A–4
RAS LANUF
SIRTICA TERMINAL
BERTH 1 MOORING LAYOUT
400
0
400
800
1200
SCALE IN FEET


RAS LANUF
SIRTICA TERMINAL
BERTH 3 MOORING LAYOUT
SCALE IN FEET
1200
800
400
0
400
A-1a
A-1b
A-2
A-3
A-4
A-5
A-6
A-7a
A-7b
MB-1
MB-2
MB-3
MB-4
MB-5
MB-6
MB-7
631 ft.
695 ft.
692 ft.
550 ft.
445.5 ft.
435 ft.
700 ft.
637 ft.
Ships manifold
P.L. header
585 ft. Ships chain
Ship 337½°(T) (U.T.M.)
35°
50°
P.1. ref berth No.1
Spar buoy
No.3 Submarine line 019°(T)

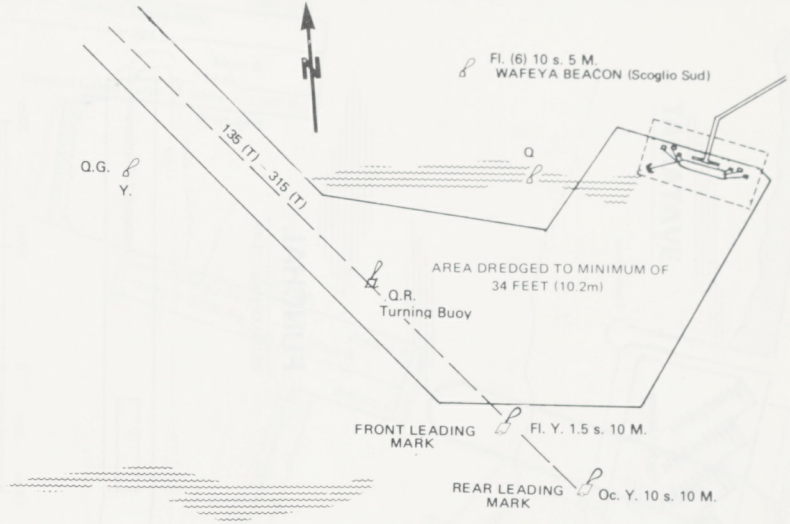

Buoy
1 buoy rope,
120 ft. plaited nylon
with plastic buoyancy collars
Triangular Plate
20 ft. Chafing Chain
Approach rope, 300 ft.
12 " plaited polypropylene
3½" Manilla Messenger
Launch connecting
approach rope to
Messenger
Tanker
RAS LANUF
SIRTICA TERMINAL
BERTH 4 SINGLE POINT MOORING



ZUEITINA

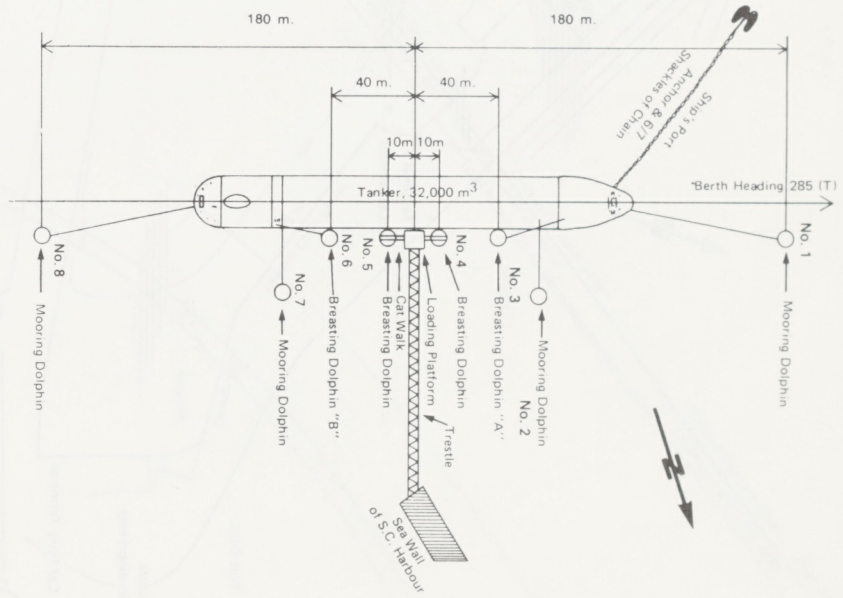
Conventional Buoy Moorings

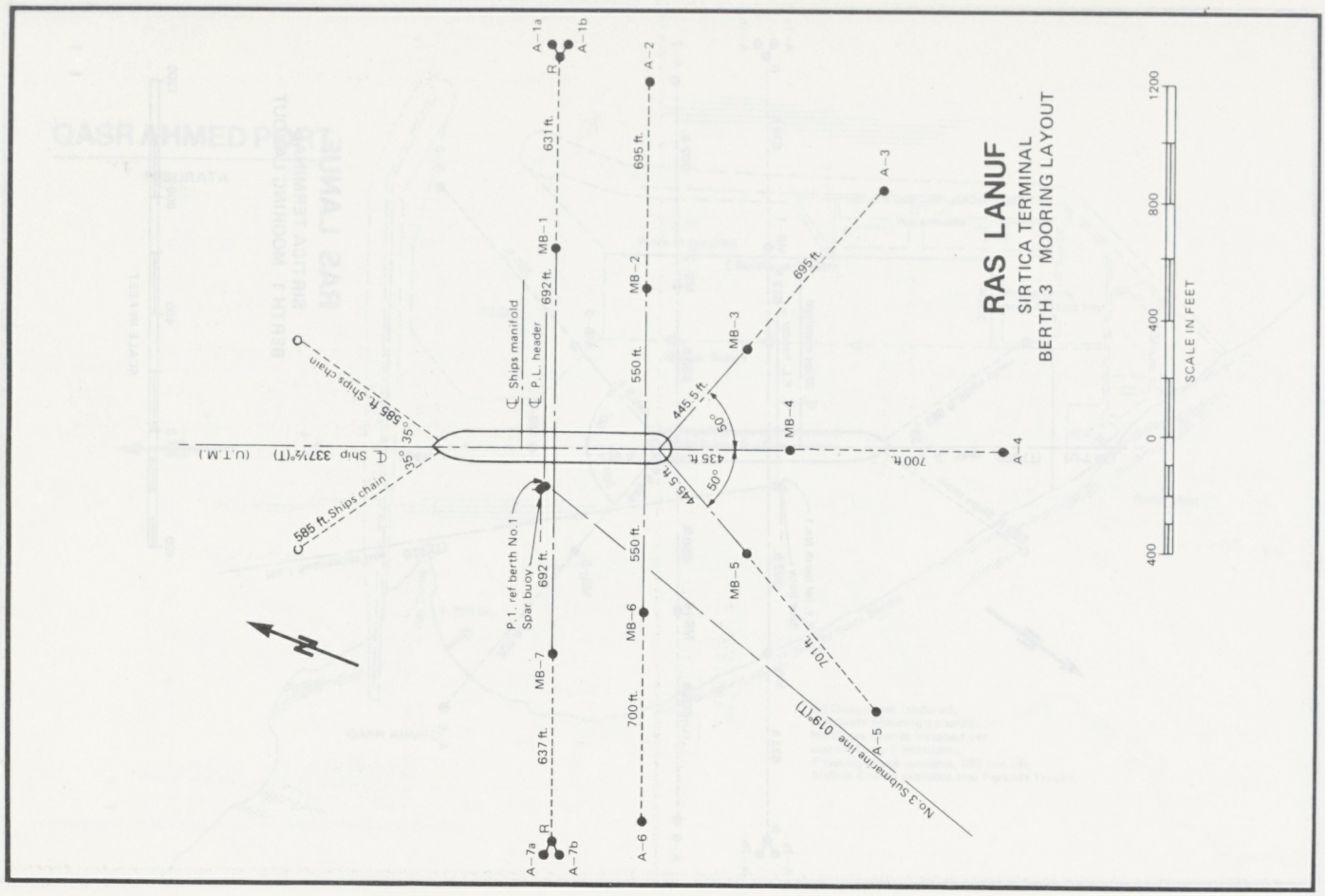
Bravo and Delta Berths

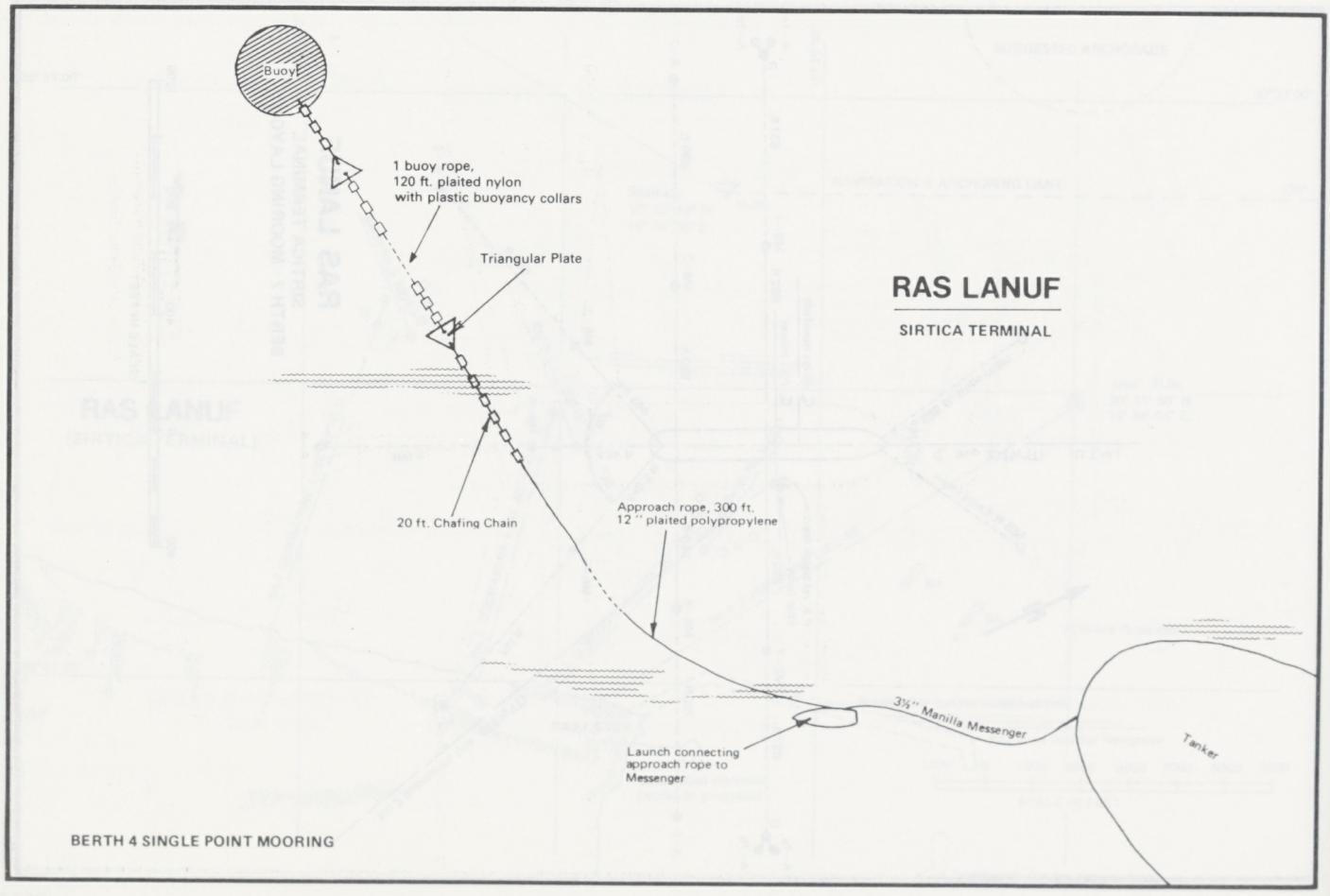


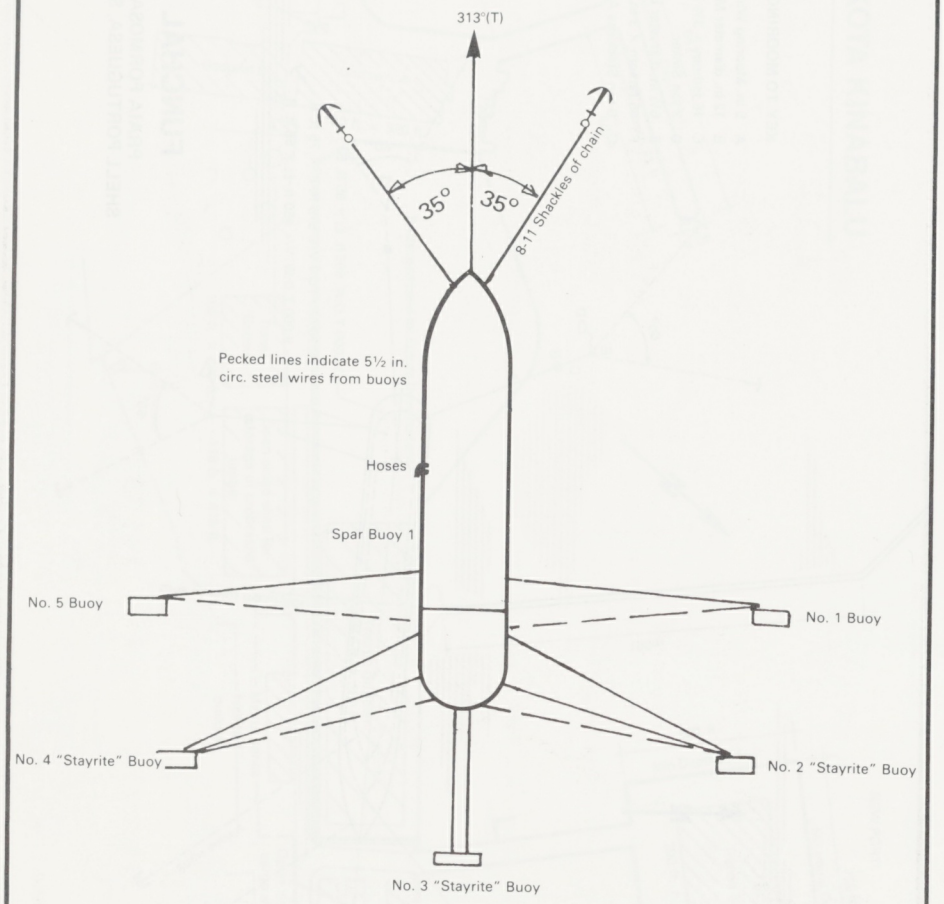
ZUEITINA

L.P.G. LOADING BERTH APPROACH AREA




RAS LANUF
SIRTICA TERMINAL
BERTH 3 MOORING LAYOUT
SCALE IN FEET
1200
800
400
0
400
A-1a
A-1b
A-2
A-3
A-4
A-5
A-6
A-7a
A-7b
MB-1
MB-2
MB-3
MB-4
MB-5
MB-6
MB-7
631 ft.
695 ft.
692 ft.
550 ft.
445.5 ft.
435 ft.
700 ft.
637 ft.
Ships manifold
P.L. header
585 ft. Ships chain
P.L. ref berth No.1
Spar buoy
No.3 Submarine line 019°(T)
Ship 337½°(T) (U.T.M.)
35°
50°
60°

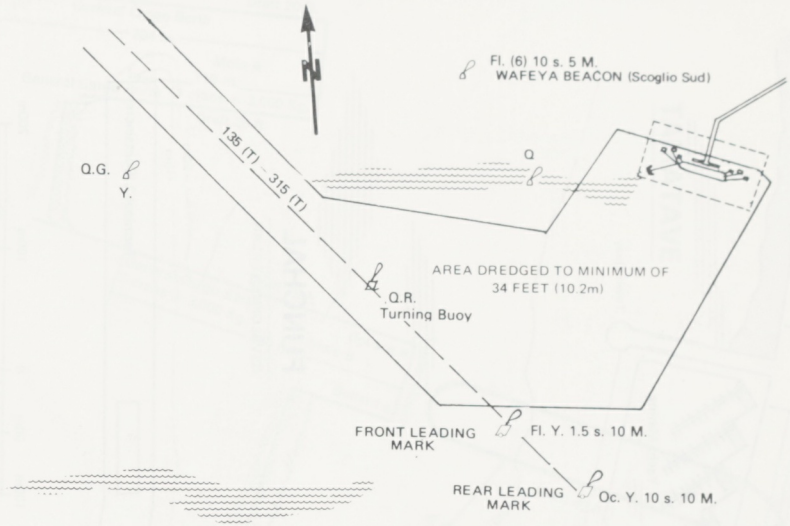

Buoy
1 buoy rope,
120 ft. plaited nylon
with plastic buoyancy collars
Triangular Plate
20 ft. Chafing Chain
Approach rope, 300 ft.
12 " plaited polypropylene
3½" Manilla Messenger
Launch connecting
approach rope to
Messenger
Tanker
RAS LANUF
SIRTICA TERMINAL
BERTH 4 SINGLE POINT MOORING



ZUEITINA

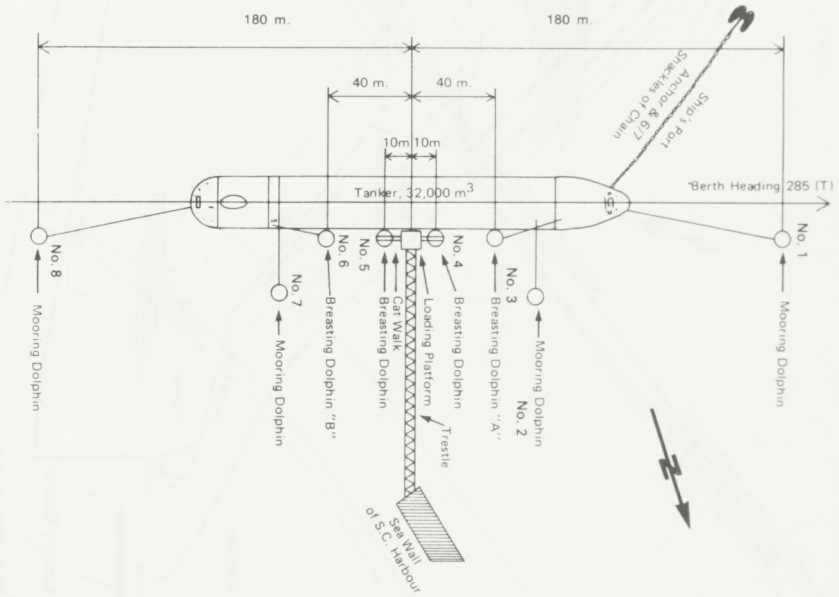
Conventional Buoy Moorings

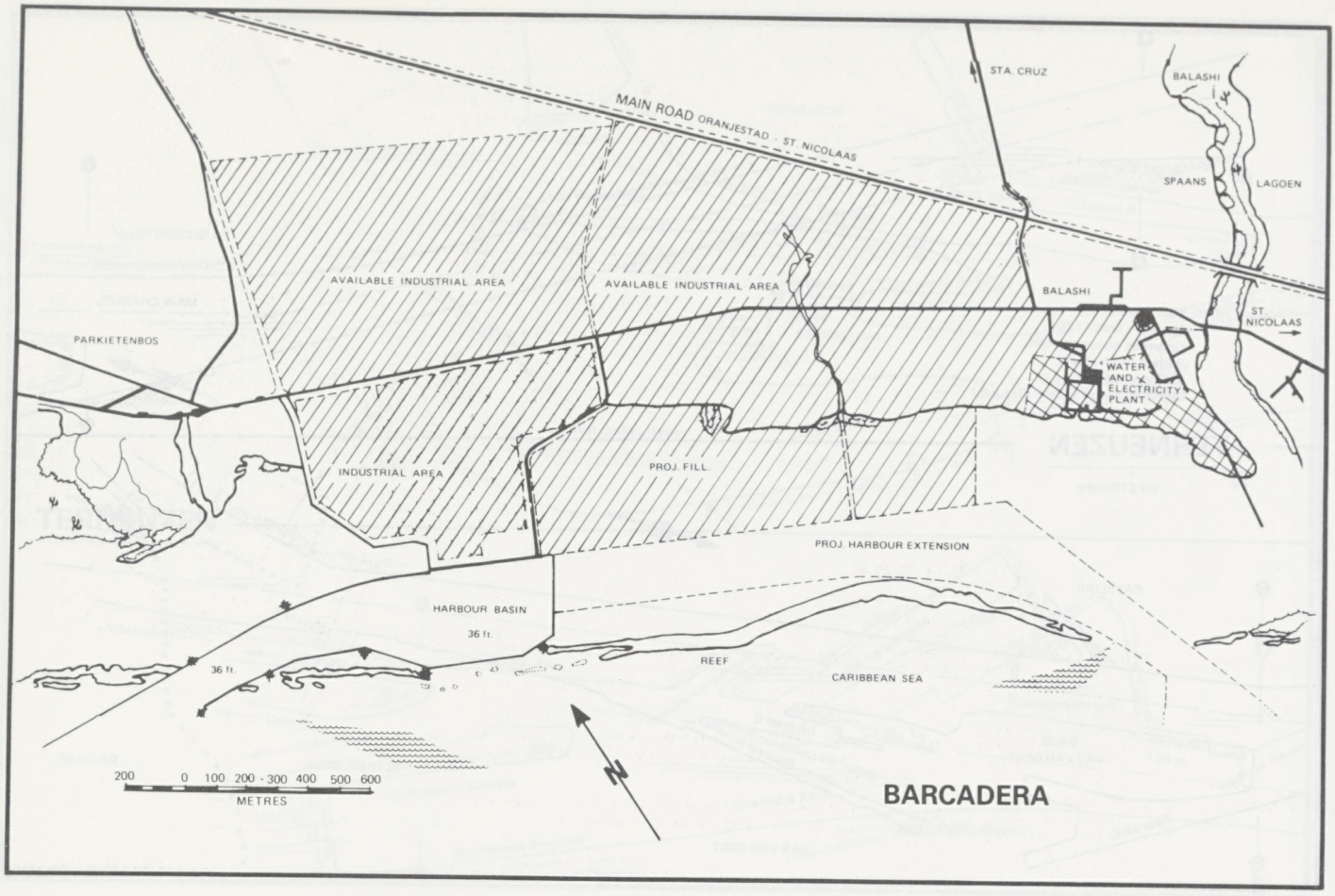
Bravo and Delta Berths

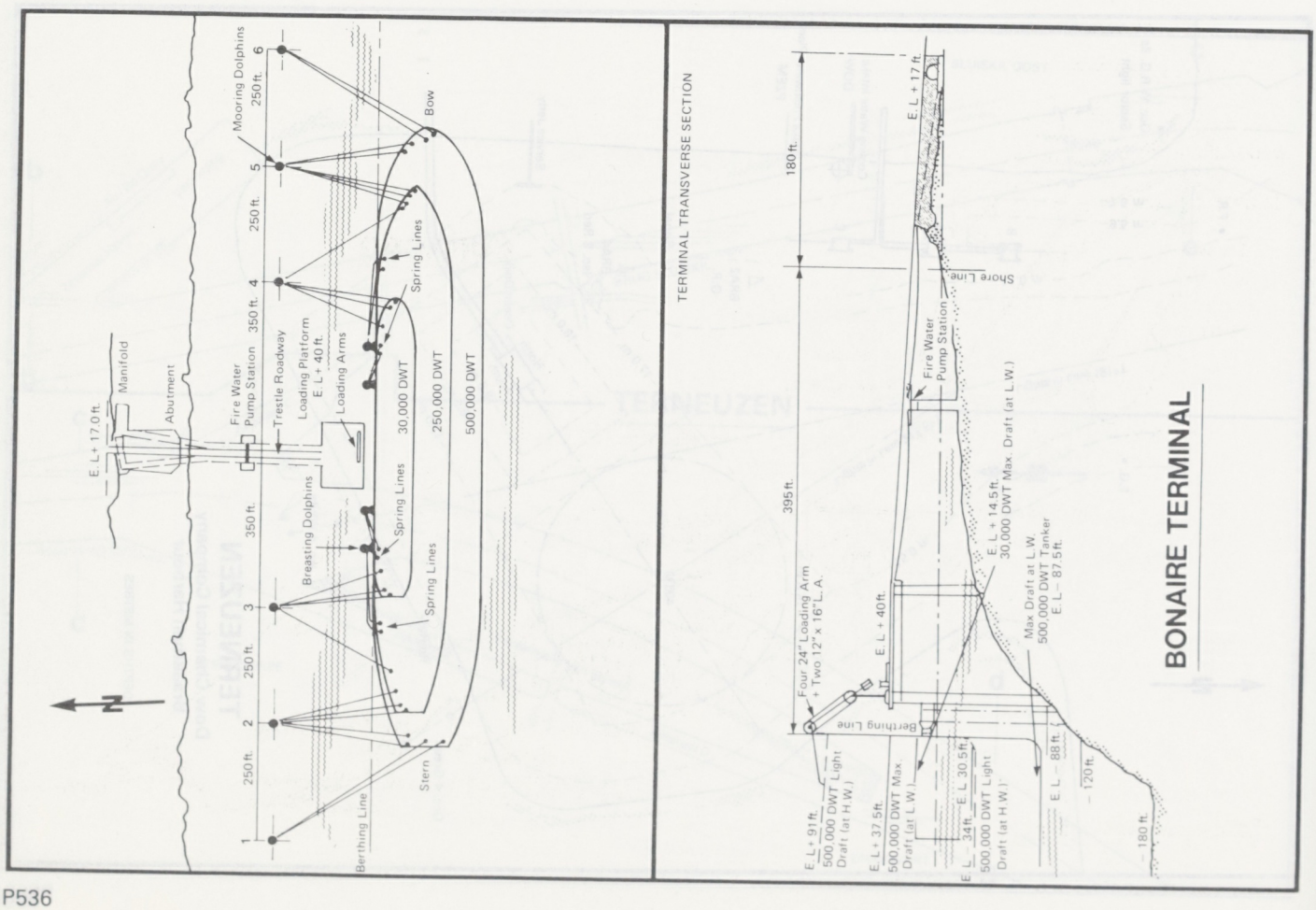


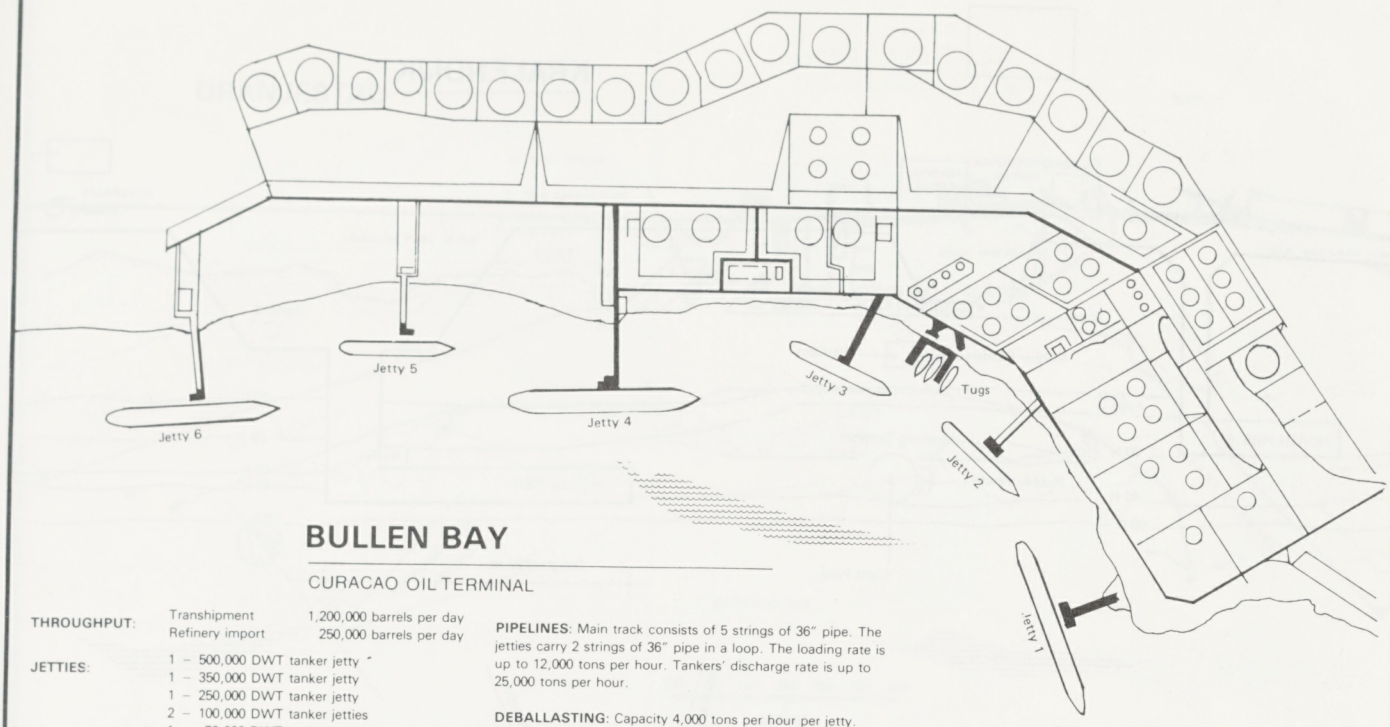
ZUEITINA

L.P.G. LOADING BERTH APPROACH AREA




STA. CRUZ
BALASHI
MAIN ROAD ORANJESTAD - ST. NICOLAAS
SPAANS LAGOEN
AVAILABLE INDUSTRIAL AREA
AVAILABLE INDUSTRIAL AREA
BALASHI
ST. NICOLAAS
PARKIETENBOS
WATER AND ELECTRICITY PLANT
INDUSTRIAL AREA
PROJ. FILL
PROJ. HARBOUR EXTENSION
HARBOUR BASIN
36 ft.
36 ft.
REEF
CARIBBEAN SEA
200 0 100 200 300 400 500 600
METRES
N
BARCADERA


E.L+17.0 ft.
Manifold
Abutment
Fire Water Pump Station
Trestle Roadway
Loading Platform E.L+40 ft.
Loading Arms
Mooring Dolphins
Breasting Dolphins
Spring Lines
Spring Lines
Spring Lines
Bow
Stern
Berthing Line
30,000 DWT
250,000 DWT
500,000 DWT
350 ft.
250 ft.
N
TERMINAL TRANSVERSE SECTION
E.L+17 ft.
180 ft.
395 ft.
Shore Line
Fire Water Pump Station
E.L+14.5 ft.
30,000 DWT Max. Draft (at L.W.)
Max. Draft at L.W. 500,000 DWT Tanker E.L-87.5 ft.
E.L+40 ft.
Four 24" Loading Arms + Two 12" x 16" L.A.
Berthing Line
E.L+91 ft. 500,000 DWT Light Draft (at H.W.)
E.L+37.5 ft. 500,000 DWT Max. Draft (at L.W.)
E.L-30.5 ft.
E.L-34 ft. 500,000 DWT Light Draft (at H.W.)
E.L-88 ft.
-120 ft.
-180 ft.
BONAIRE TERMINAL



BULLEN BAY

CURACAO OIL TERMINAL

THROUGHPUT:

Transhipment	1,200,000 barrels per day
Refinery import	250,000 barrels per day

JETTIES:

- 1 – 500,000 DWT tanker jetty
- 1 – 350,000 DWT tanker jetty
- 1 – 250,000 DWT tanker jetty
- 2 – 100,000 DWT tanker jetties
- 1 – 70,000 DWT tanker jetty
- 2 – Tugboat jetties

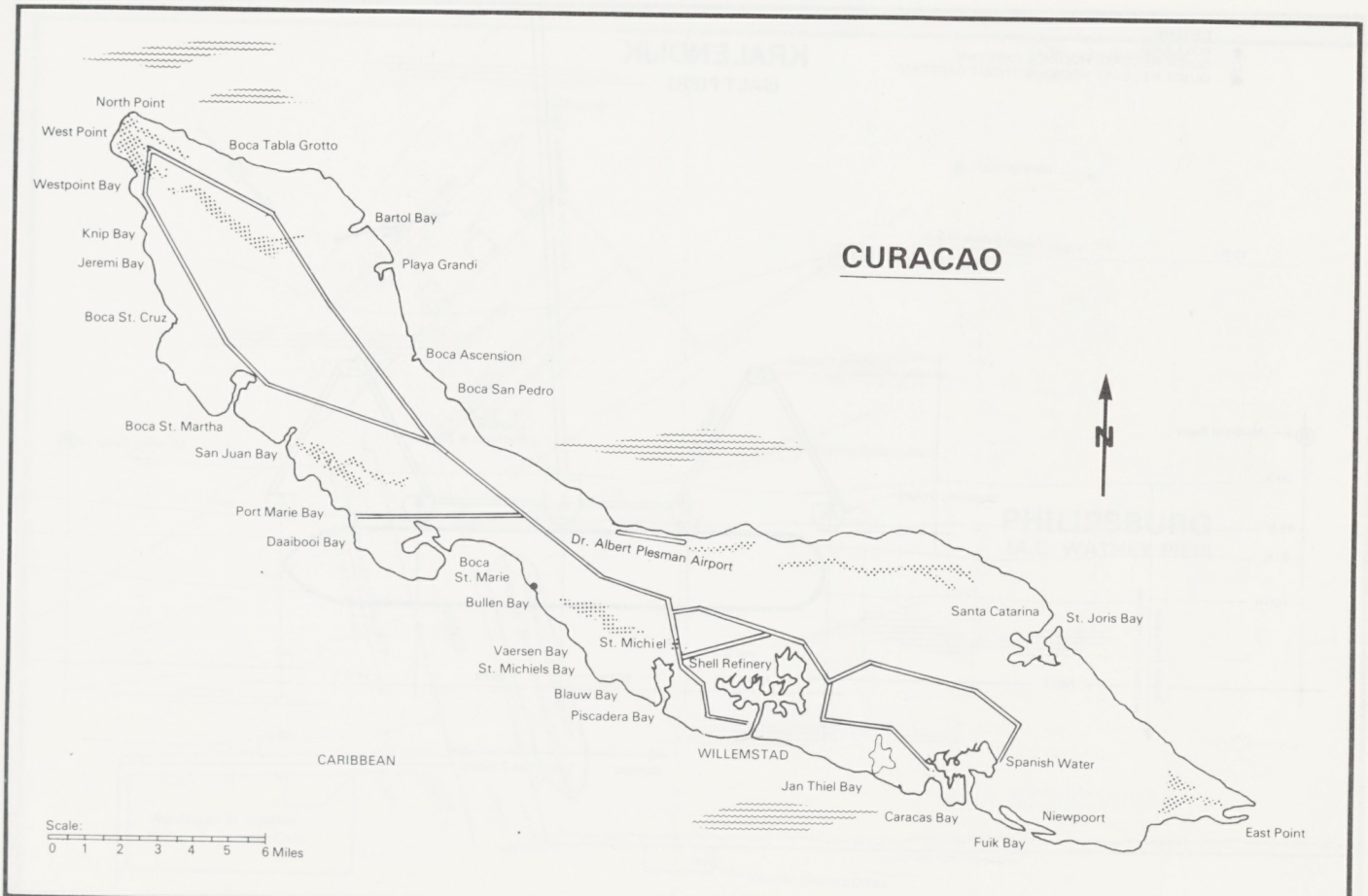
TOTAL TANK CAPACITY – 17,750,000 barrels

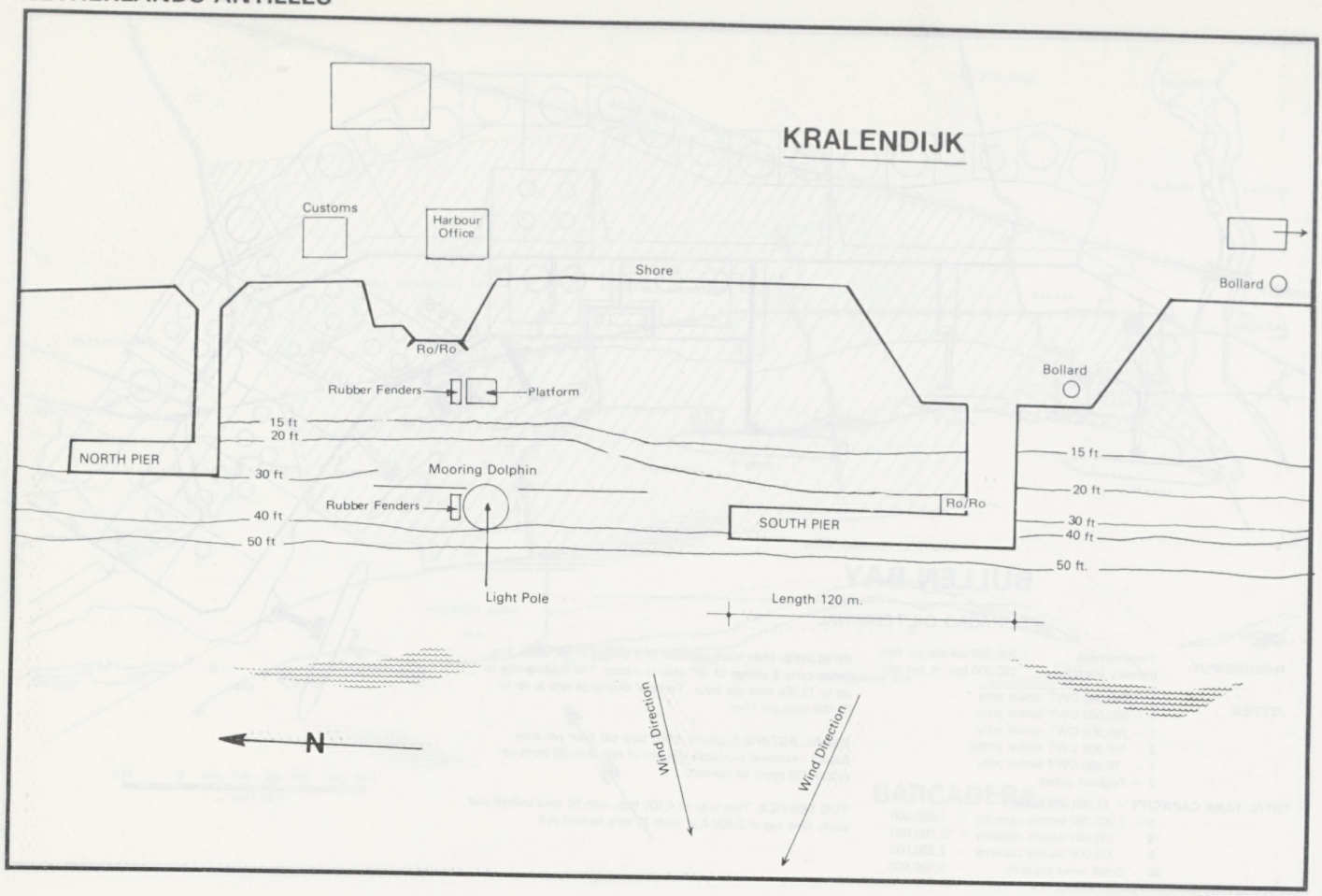
1	1,000,000 barrels capacity –	1,000,000
16	750,000 barrels capacity –	12,000,000
6	375,000 barrels capacity –	2,250,000
38	Small tanks capacity –	2,500,000

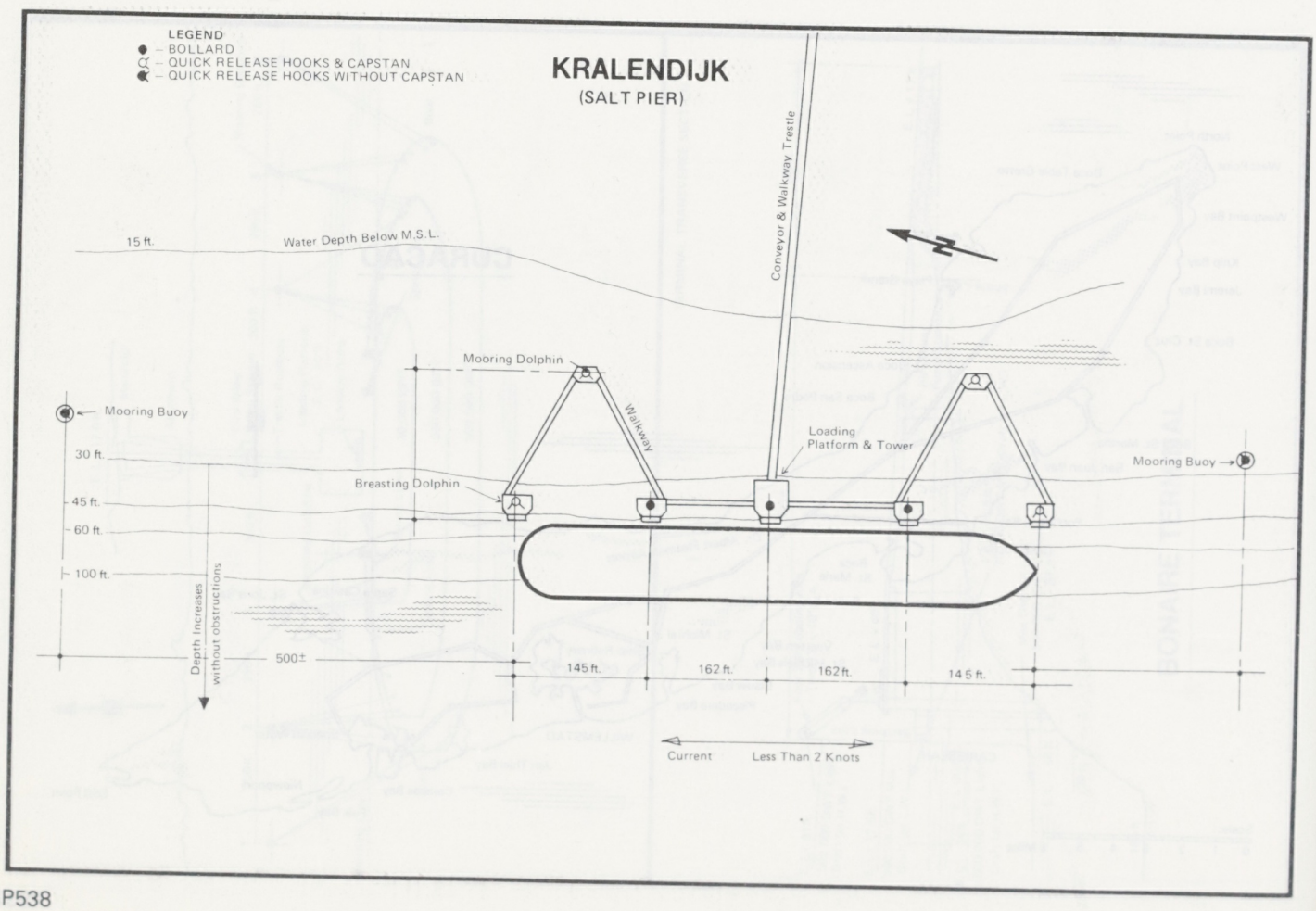
PIPELINES: Main track consists of 5 strings of 36" pipe. The jetties carry 2 strings of 36" pipe in a loop. The loading rate is up to 12,000 tons per hour. Tankers' discharge rate is up to 25,000 tons per hour.

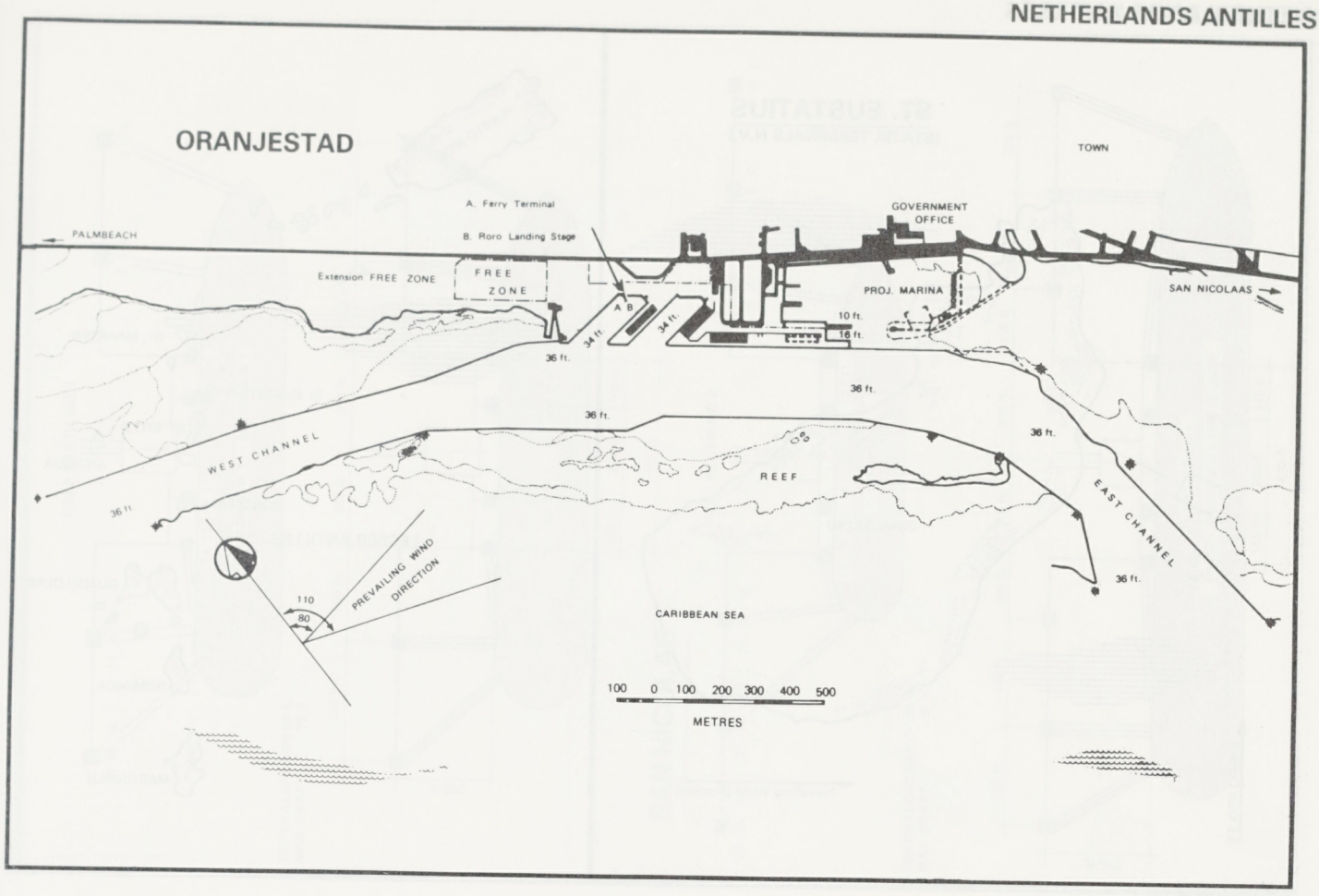
DEBALLASTING: Capacity 4,000 tons per hour per jetty. Ballast treatment produces affluent of less than 20 parts per million (20 ppm) oil content.

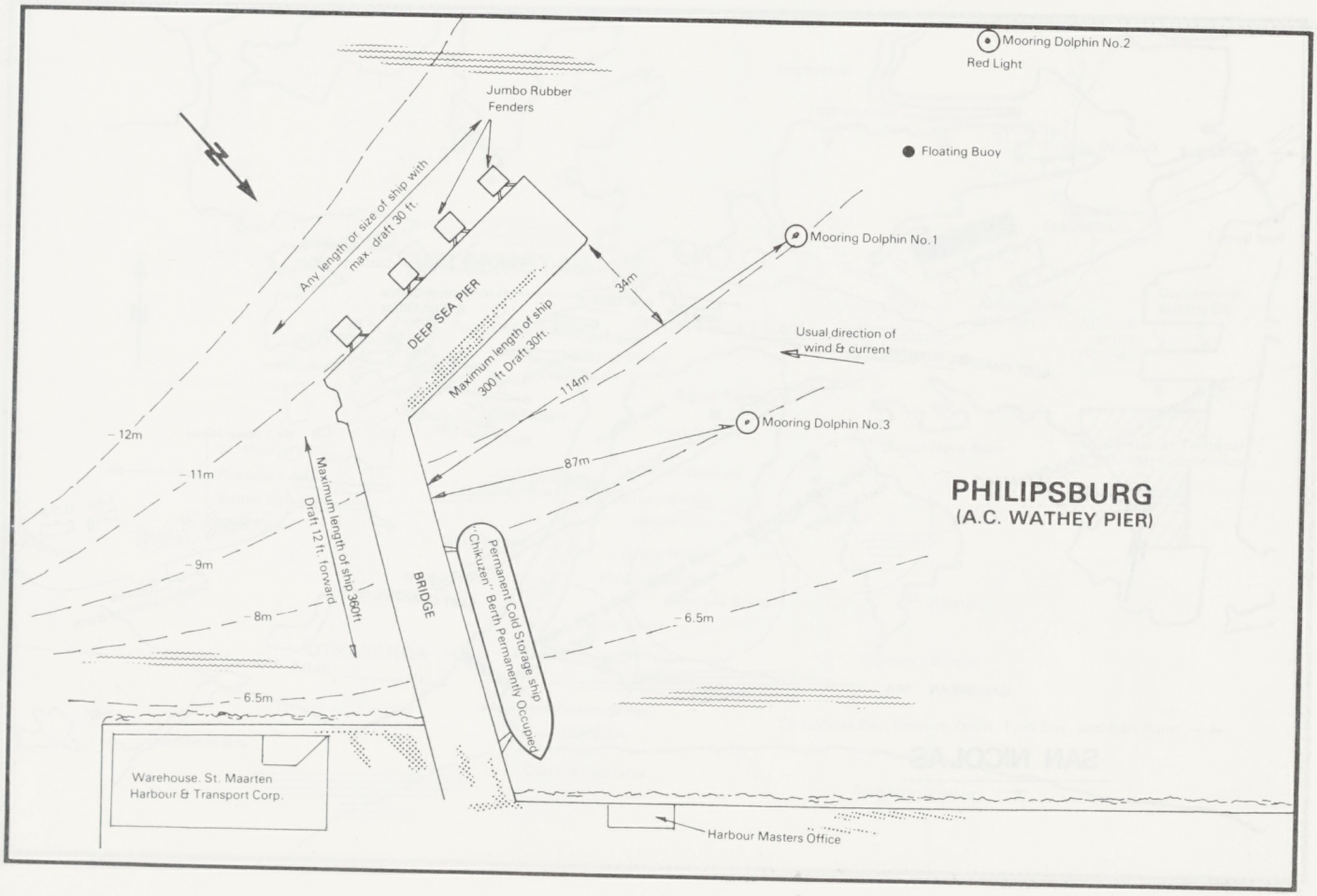
TUG SERVICE: Two tugs of 4,500 h.p. with 50 tons bollard pull each. One tug of 2,500 h.p. with 35 tons bollard pull.

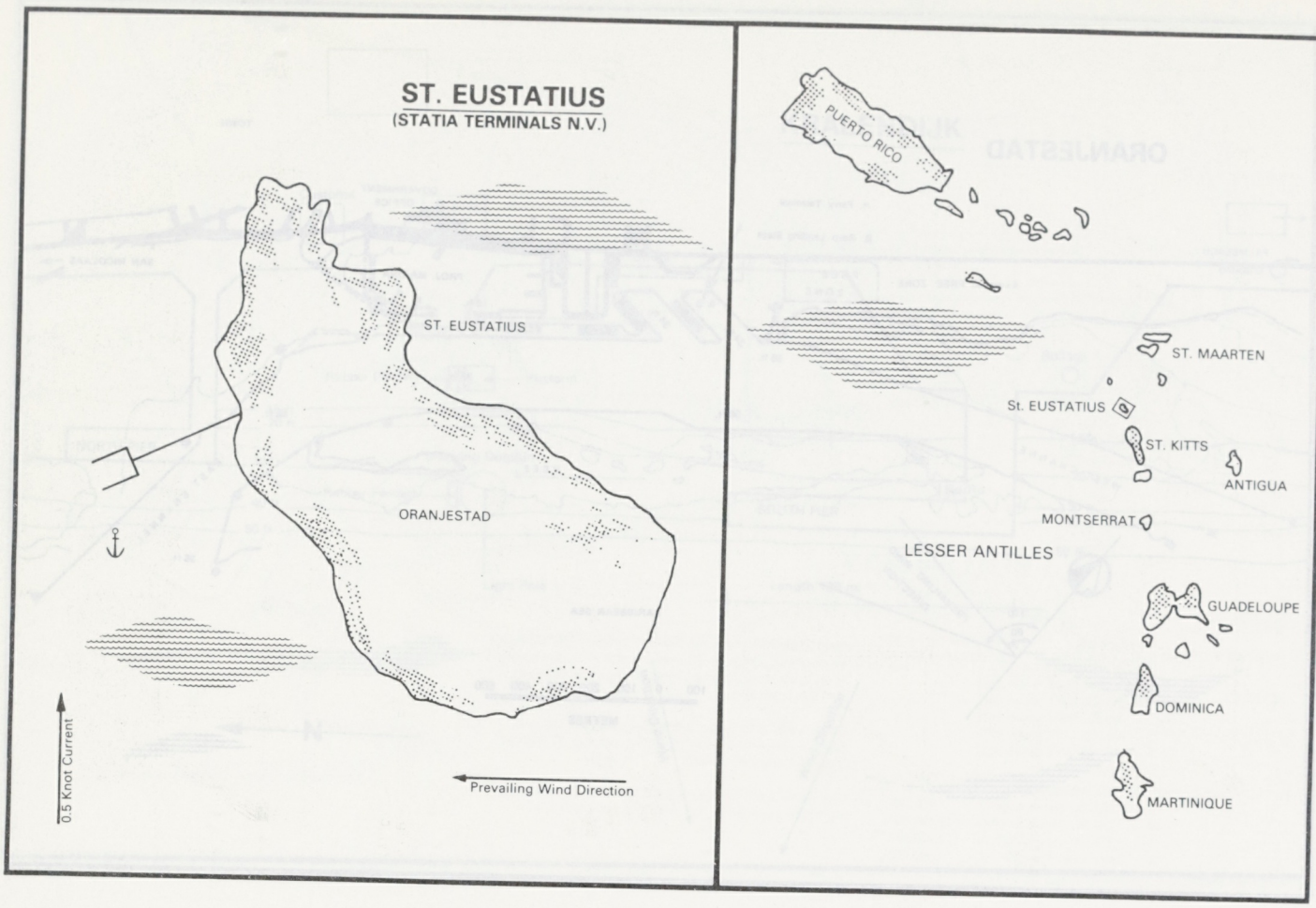


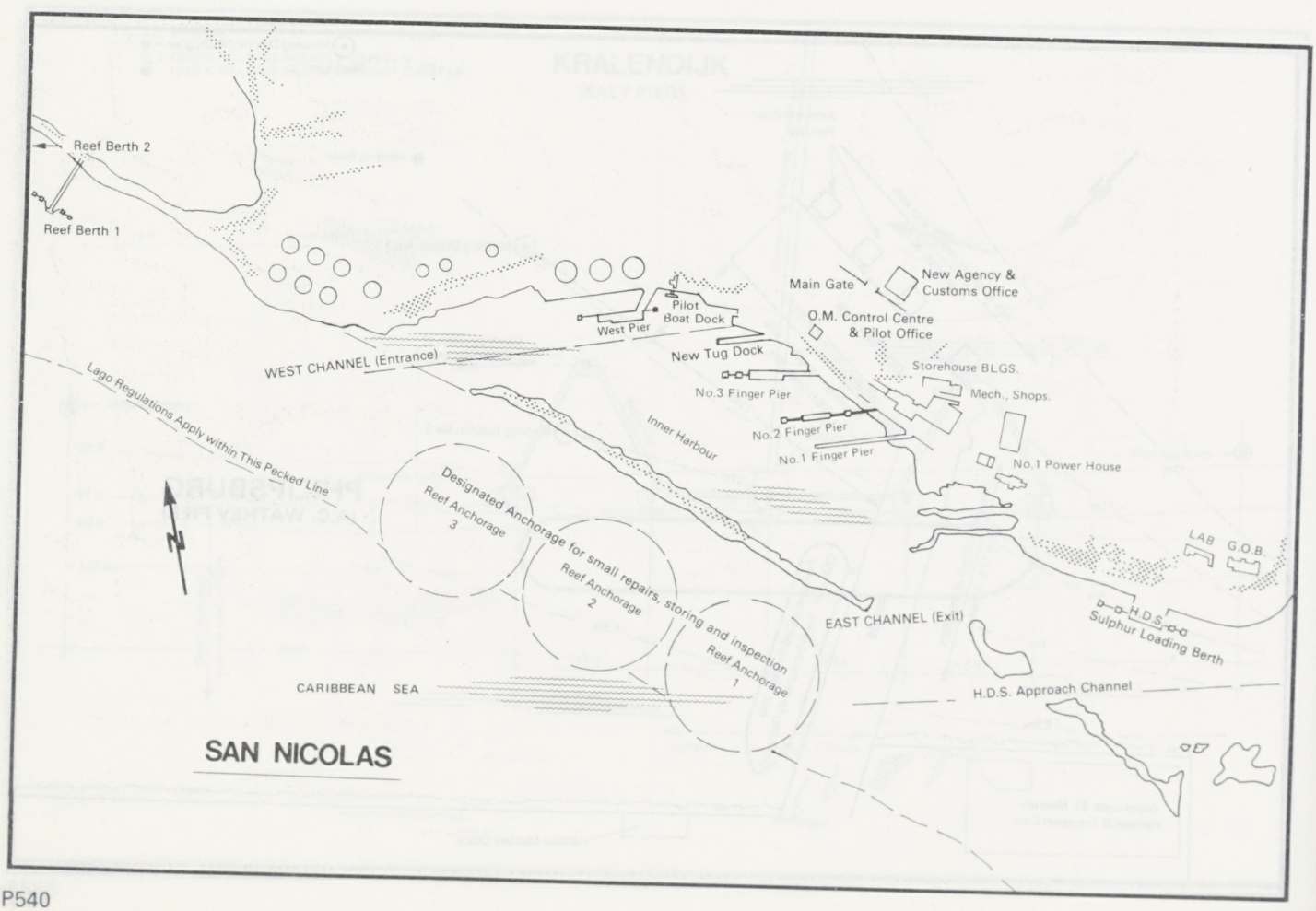

KRALENDIJK
Customs
Harbour Office
Shore
Bollard
Ro/Ro
Rubber Fenders
Platform
15 ft
20 ft
NORTH PIER
30 ft
Mooring Dolphin
Rubber Fenders
40 ft
50 ft
Light Pole
Bollard
15 ft
20 ft
30 ft
40 ft
50 ft.
Ro/Ro
SOUTH PIER
Length 120 m.
N
Wind Direction
Wind Direction

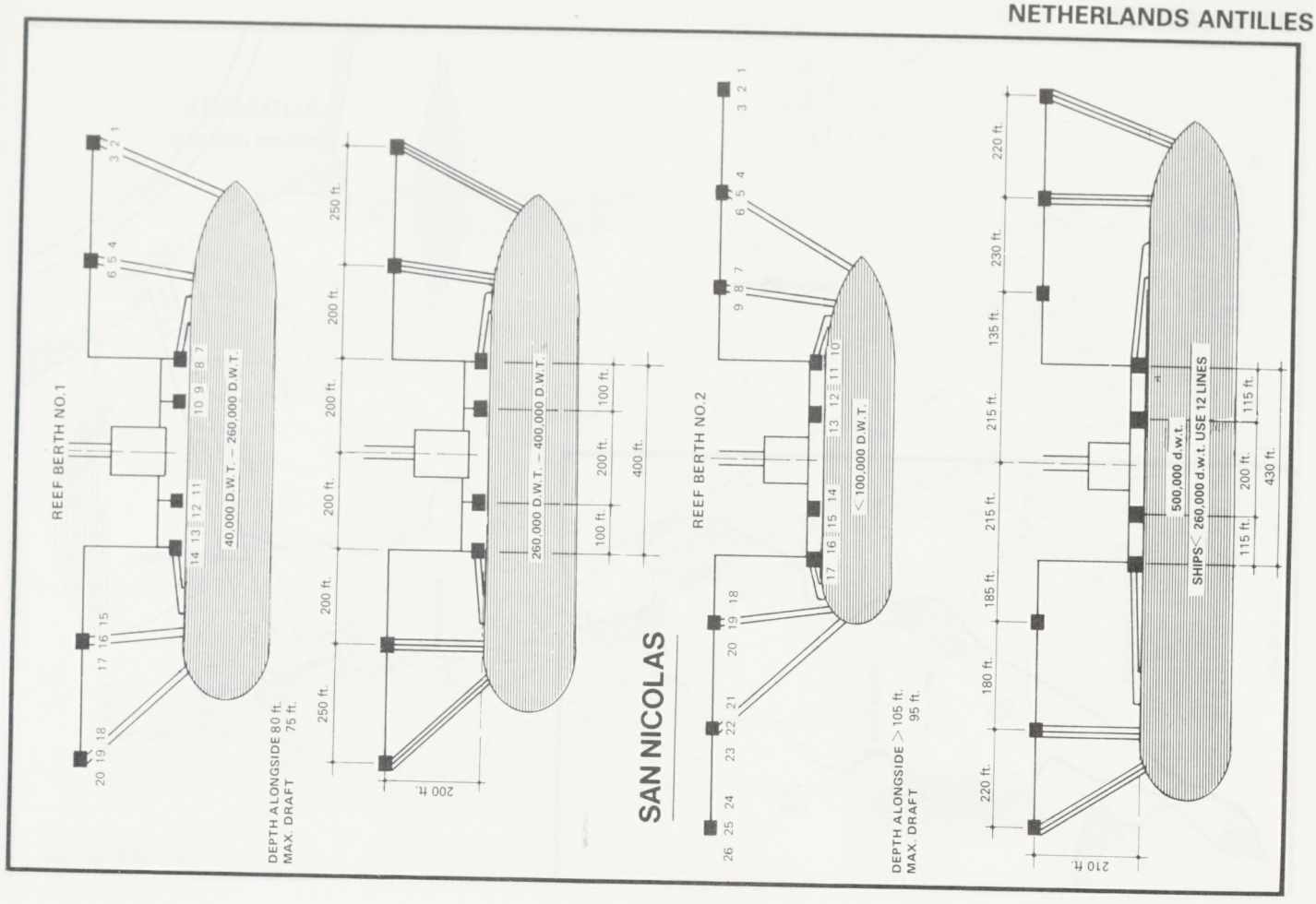

LEGEND
● – BOLLARD
○ – QUICK RELEASE HOOKS & CAPSTAN
◐ – QUICK RELEASE HOOKS WITHOUT CAPSTAN
KRALENDIJK
(SALT PIER)
Conveyor & Walkway Trestle
15 ft.
Water Depth Below M.S.L.
N
Mooring Dolphin
Walkway
Mooring Buoy
30 ft.
45 ft.
60 ft.
100 ft.
Breasting Dolphin
Loading Platform & Tower
Mooring Buoy
Depth Increases without obstructions
500±
145 ft.
162 ft.
162 ft.
145 ft.
Current
Less Than 2 Knots

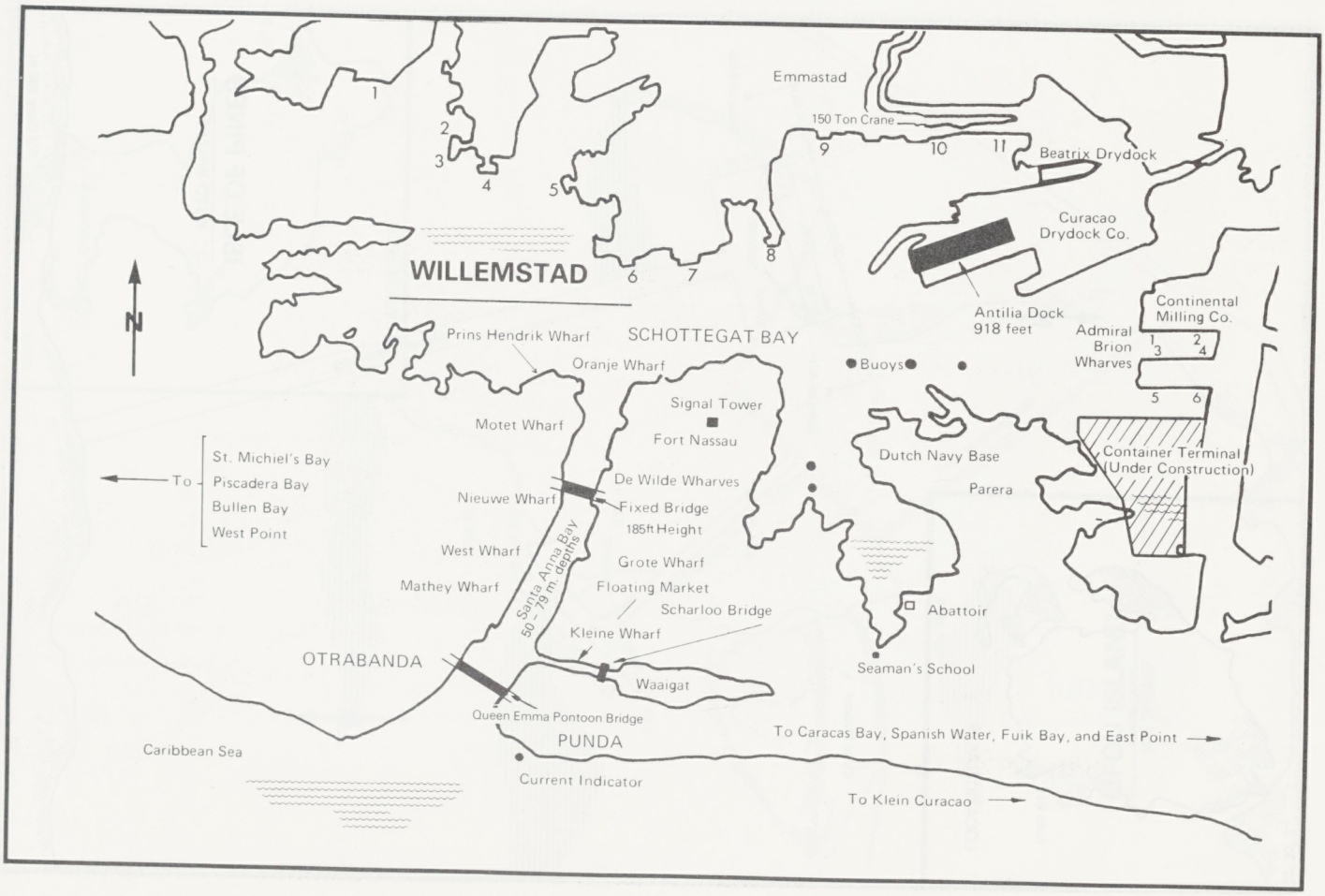

ORANJESTAD
TOWN
A. Ferry Terminal
B. Roro Landing Stage
GOVERNMENT OFFICE
PALMBEACH
Extension FREE ZONE
FREE ZONE
PROJ. MARINA
SAN NICOLAAS
A B
34 ft.
34 ft.
10 ft.
16 ft.
36 ft.
36 ft.
36 ft.
36 ft.
36 ft.
WEST CHANNEL
REEF
EAST CHANNEL
PREVAILING WIND DIRECTION
110
80
CARIBBEAN SEA
100 0 100 200 300 400 500
METRES

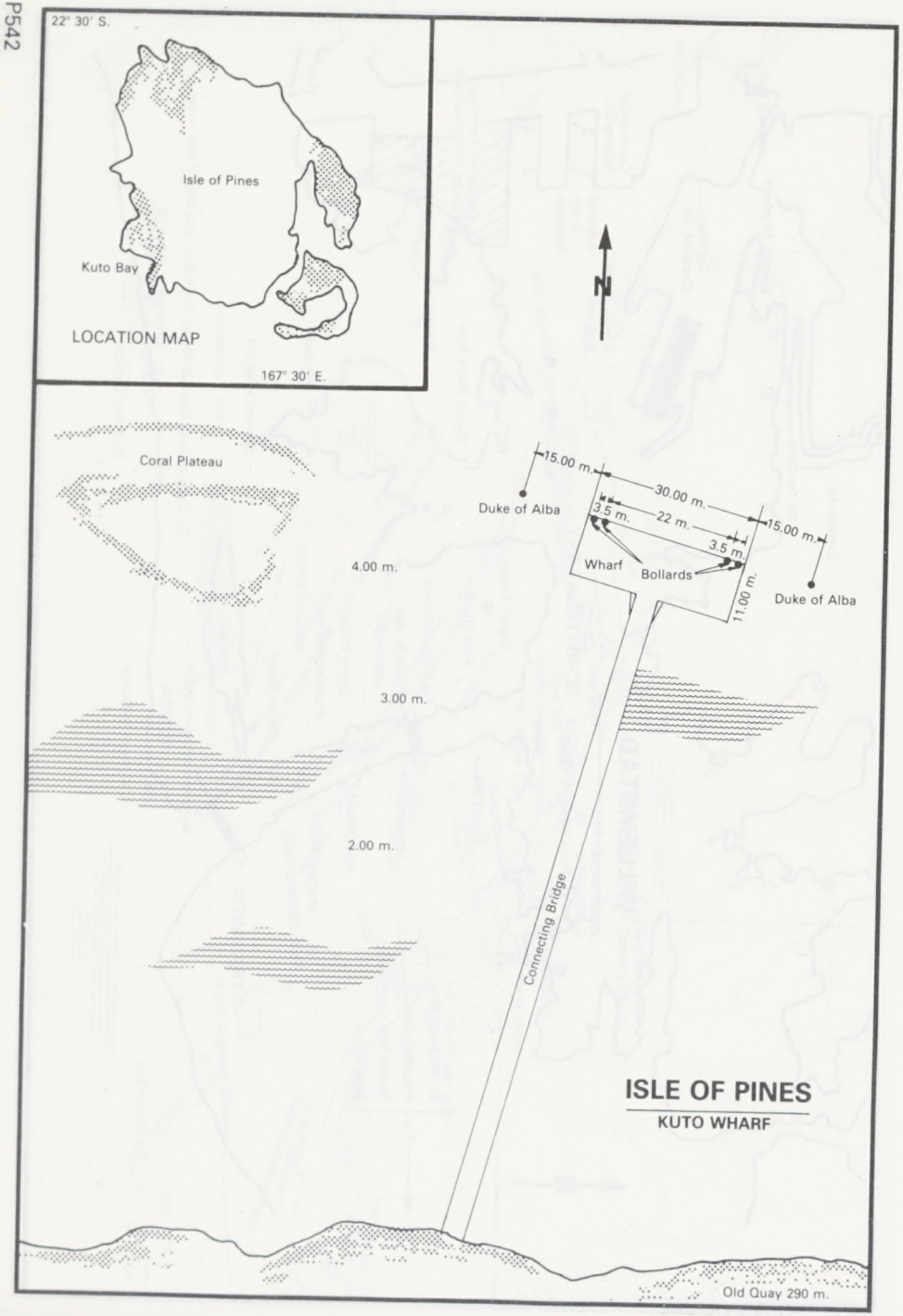

Mooring Dolphin No.2
Red Light
Jumbo Rubber Fenders
Floating Buoy
Any length or size of ship with max. draft 30 ft.
Mooring Dolphin No.1
DEEP SEA PIER
34m
Maximum length of ship 300 ft Draft 30ft.
Usual direction of wind & current
114m
Mooring Dolphin No.3
87m
PHILIPSBURG
(A.C. WATHEY PIER)
12m
11m
9m
8m
6.5m
6.5m
Maximum length of ship 360ft Draft 12 ft. forward
BRIDGE
Permanent Cold Storage ship "Chikuzen" Berth Permanently Occupied
Warehouse: St. Maarten Harbour & Transport Corp.
Harbour Masters Office

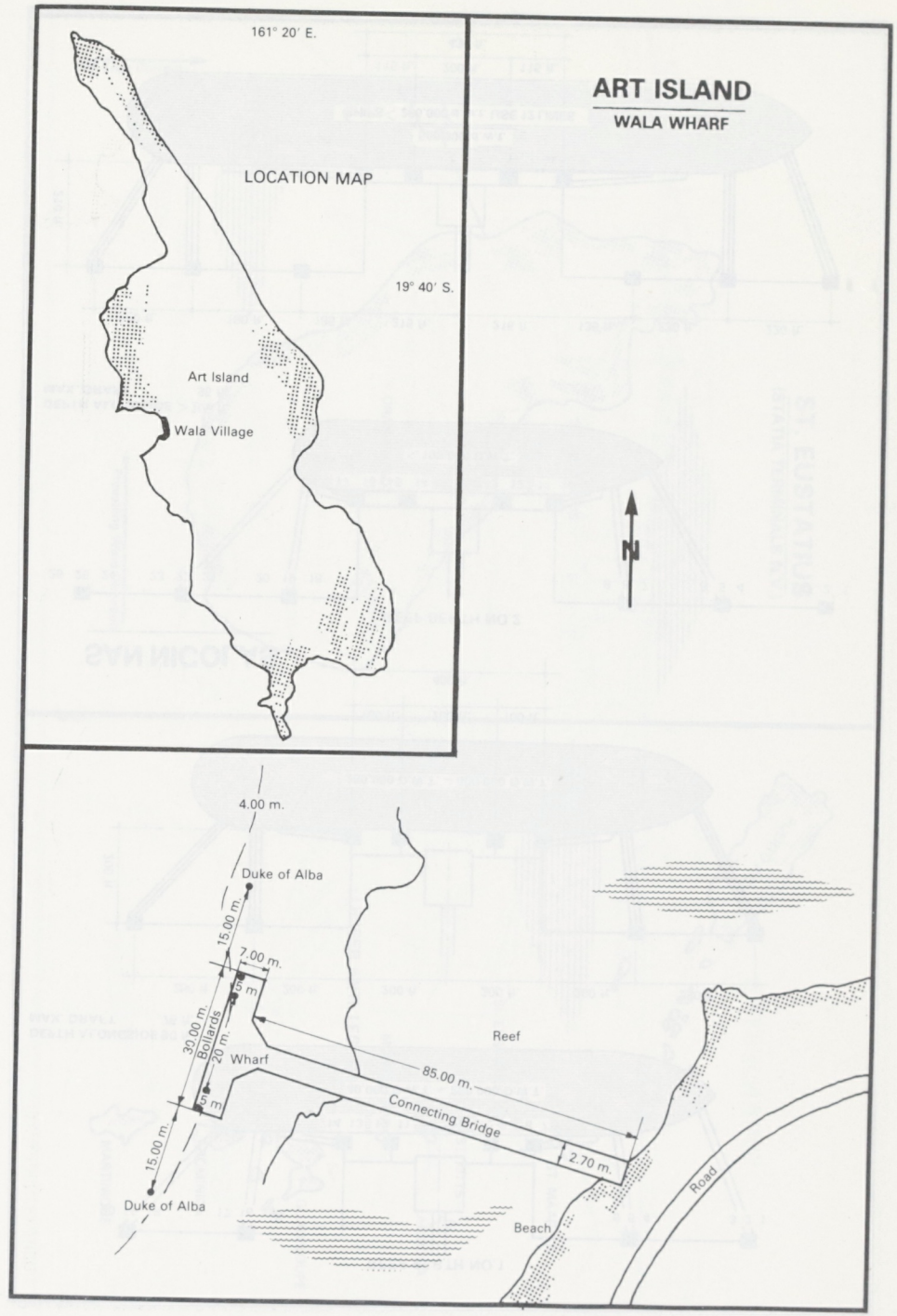

ST. EUSTATIUS
(STATIA TERMINALS N.V.)
ST. EUSTATIUS
ORANJESTAD
0.5 Knot Current
Prevailing Wind Direction
PUERTO RICO
ST. MAARTEN
St. EUSTATIUS
ST. KITTS
ANTIGUA
MONTSERRAT
LESSER ANTILLES
GUADELOUPE
DOMINICA
MARTINIQUE

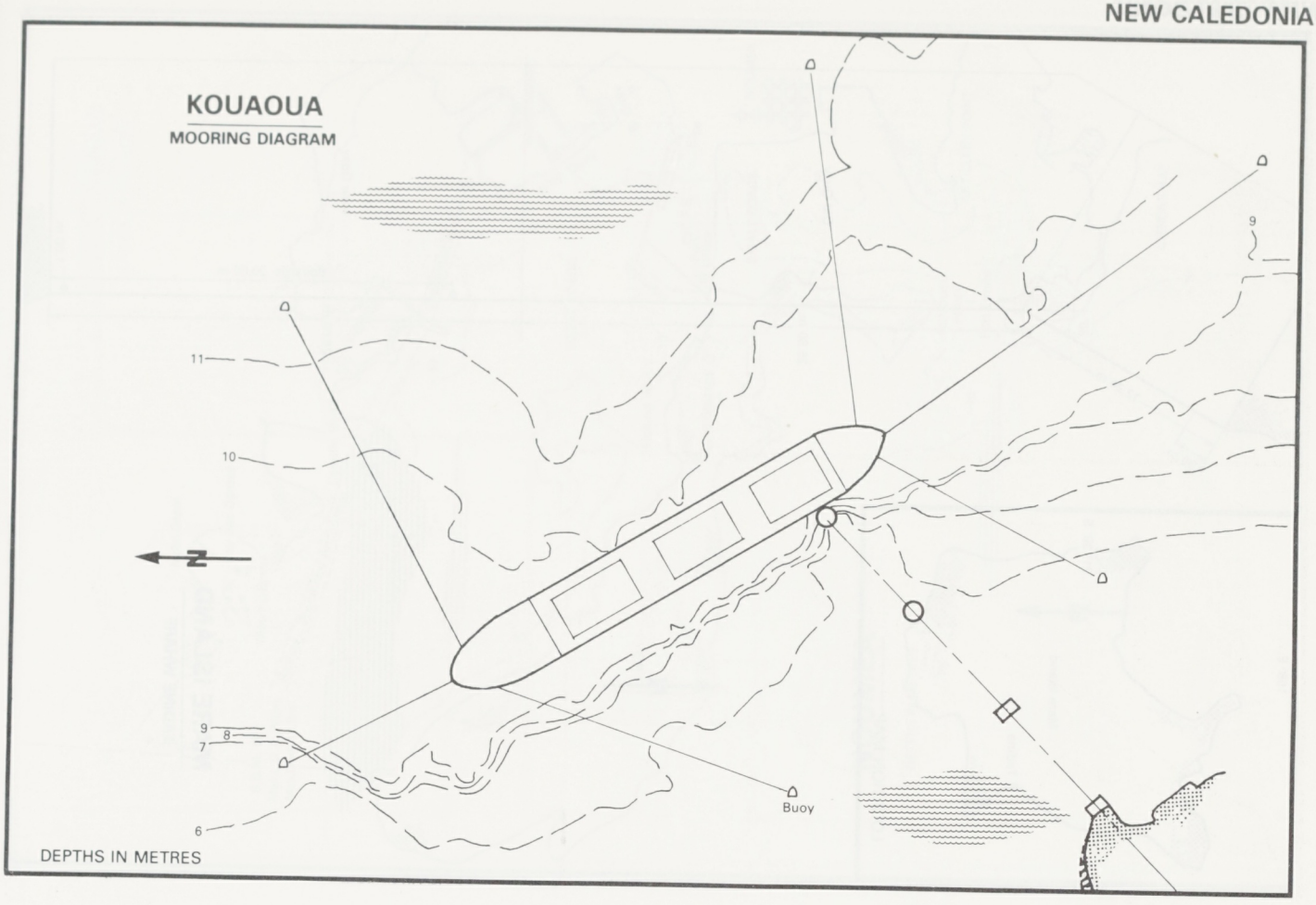

Reef Berth 2
Reef Berth 1
Main Gate
New Agency &
Customs Office
Pilot
Boat Dock
West Pier
O.M. Control Centre
& Pilot Office
WEST CHANNEL (Entrance)
New Tug Dock
Storehouse BLGS.
No.3 Finger Pier
Mech., Shops.
Lago Regulations Apply within This Pecked Line
Inner Harbour
No.2 Finger Pier
No.1 Finger Pier
No.1 Power House
Designated Anchorage for small repairs, storing and inspection
Reef Anchorage
3
Reef Anchorage
2
Reef Anchorage
1
LAB
G.O.B.
H.D.S.
Sulphur Loading Berth
EAST CHANNEL (Exit)
CARIBBEAN SEA
H.D.S. Approach Channel
SAN NICOLAS

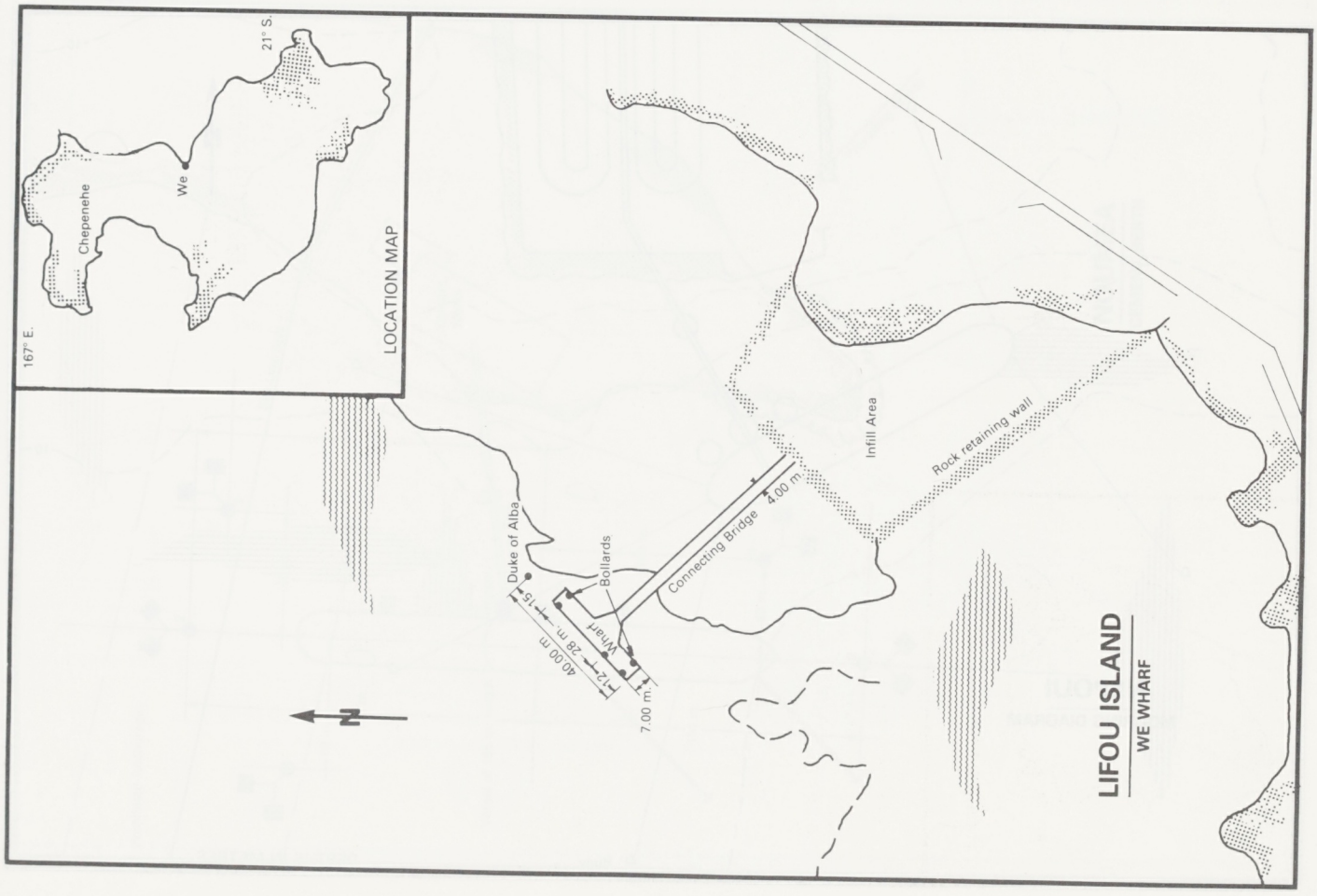

SAN NICOLAS
REEF BERTH NO.1
40,000 D.W.T. – 260,000 D.W.T.
DEPTH ALONGSIDE 80 ft. 75 ft.
MAX. DRAFT
260,000 D.W.T. – 400,000 D.W.T.
200 ft.
REEF BERTH NO.2
< 100,000 D.W.T.
DEPTH ALONGSIDE > 105 ft. 95 ft.
MAX. DRAFT
SHIPS < 260,000 d.w.t. USE 12 LINES
500,000 d.w.t.
210 ft.

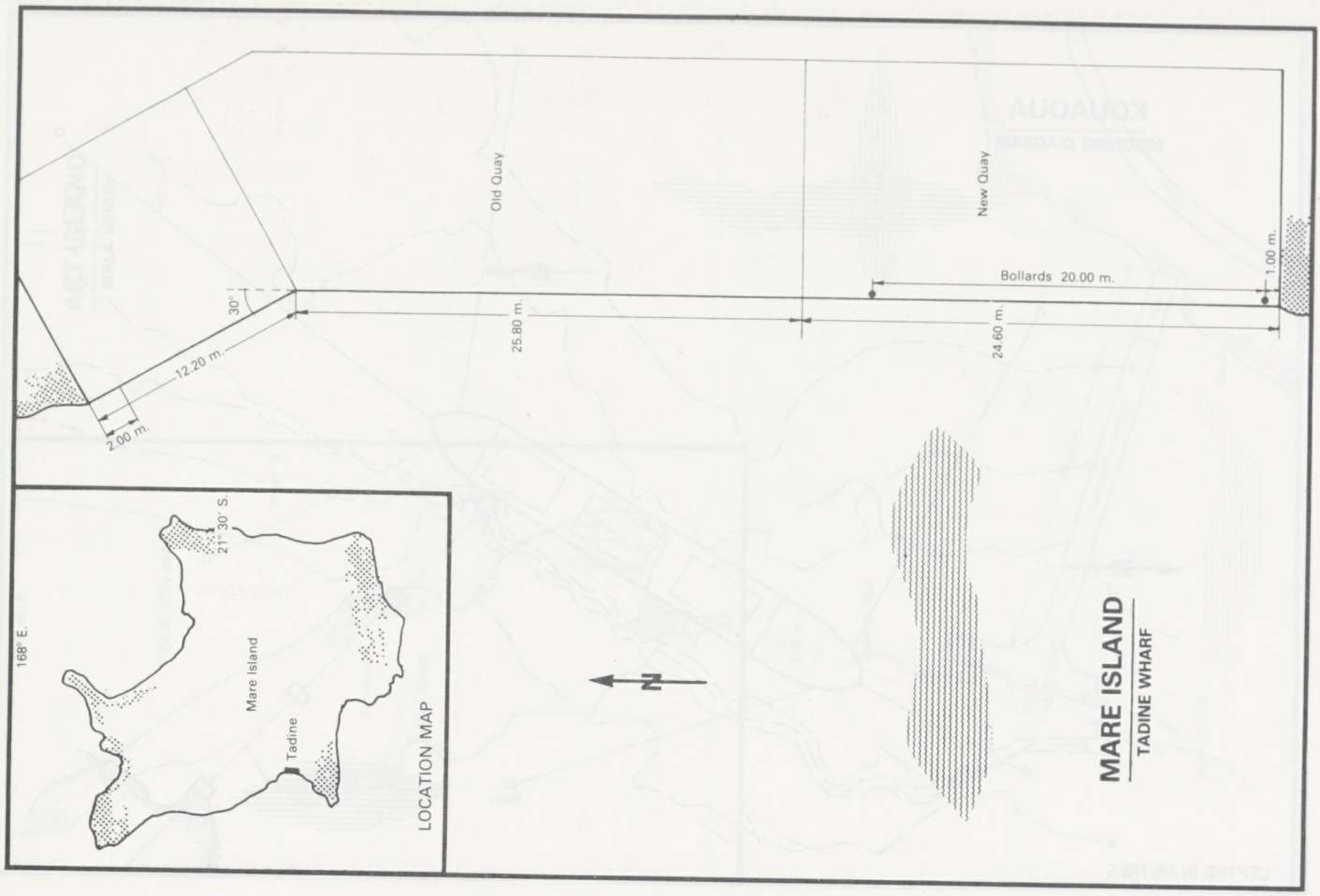

WILLEMSTAD
N
Prins Hendrik Wharf
SCHOTTEGAT BAY
Oranje Wharf
Motet Wharf
Signal Tower
Fort Nassau
To
St. Michiel's Bay
Piscadera Bay
Bullen Bay
West Point
Nieuwe Wharf
De Wilde Wharves
Fixed Bridge
185ft Height
West Wharf
Grote Wharf
Mathey Wharf
Floating Market
Scharloo Bridge
Santa Anna Bay
50 – 79 m. depths
Kleine Wharf
OTRABANDA
Waaigat
Queen Emma Pontoon Bridge
Caribbean Sea
PUNDA
Current Indicator
To Klein Curacao
Emmastad
150 Ton Crane
Beatrix Drydock
Curacao Drydock Co.
Antilia Dock 918 feet
Continental Milling Co.
Admiral Brion Wharves
Buoys
Dutch Navy Base
Parera
Container Terminal (Under Construction)
Abattoir
Seaman's School
To Caracas Bay, Spanish Water, Fuik Bay, and East Point

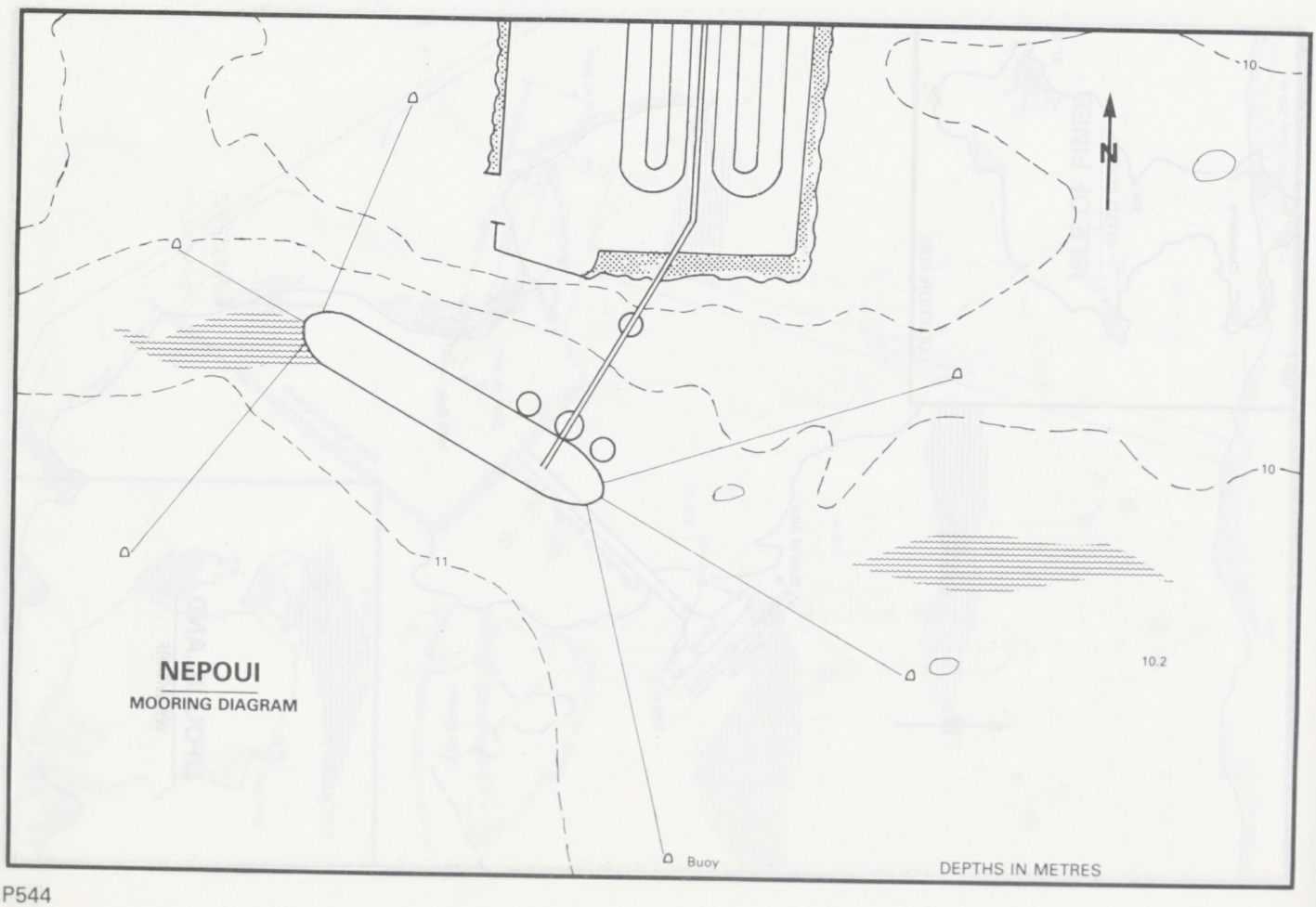

22° 30′ S.
Isle of Pines
Kuto Bay
LOCATION MAP
167° 30′ E.
N
Coral Plateau
4.00 m.
3.00 m.
2.00 m.
15.00 m.
Duke of Alba
30.00 m.
3.5 m.
22 m.
3.5 m.
15.00 m.
Wharf
Bollards
11.00 m.
Duke of Alba
Connecting Bridge
Old Quay 290 m.
ISLE OF PINES
KUTO WHARF

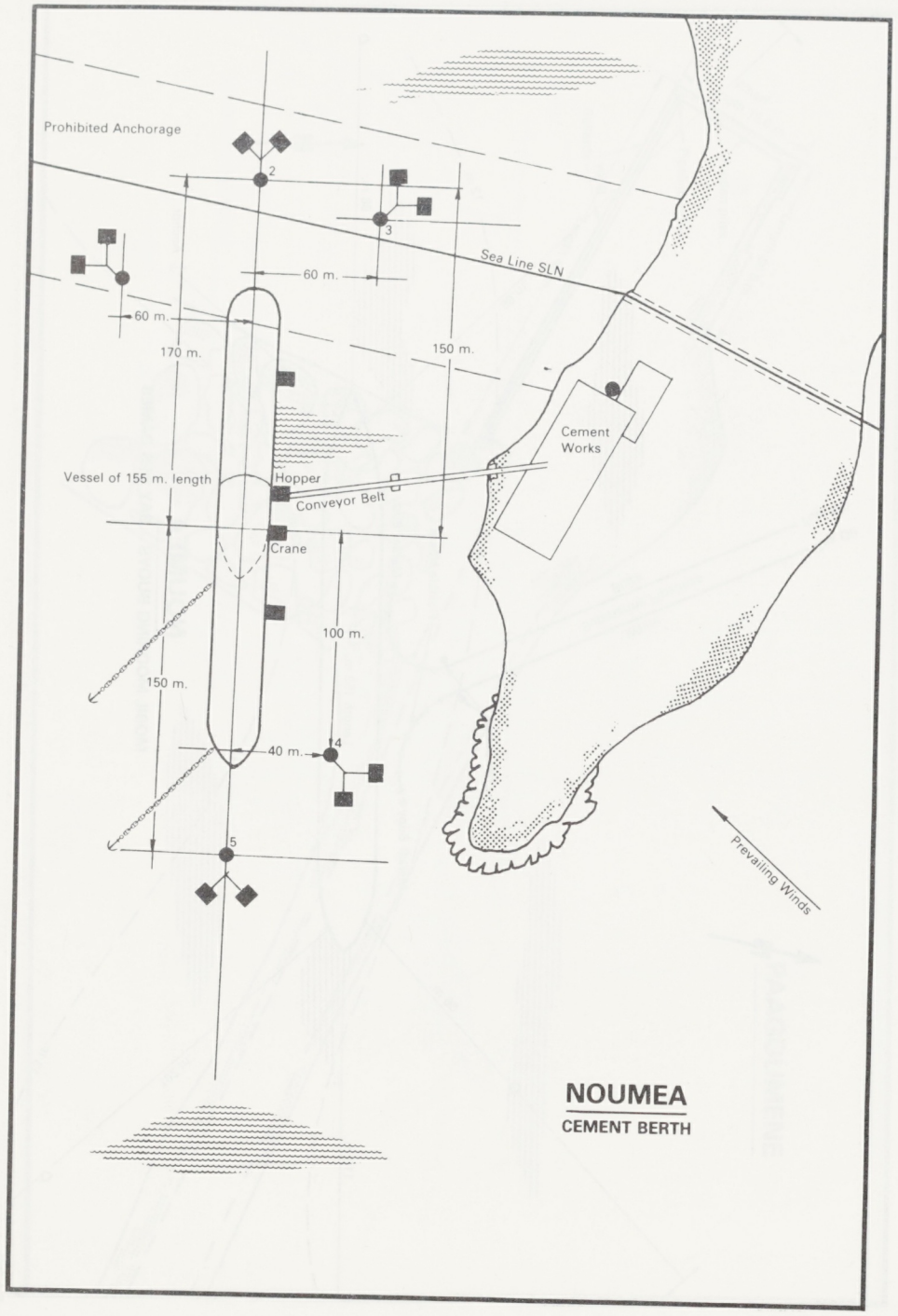

161° 20′ E.
ART ISLAND
WALA WHARF
LOCATION MAP
19° 40′ S.
Art Island
Wala Village
N
4.00 m.
Duke of Alba
15.00 m.
7.00 m.
5 m.
30.00 m.
Bollards
20 m.
Wharf
5 m.
15.00 m.
Duke of Alba
Reef
85.00 m.
Connecting Bridge
2.70 m.
Road
Beach

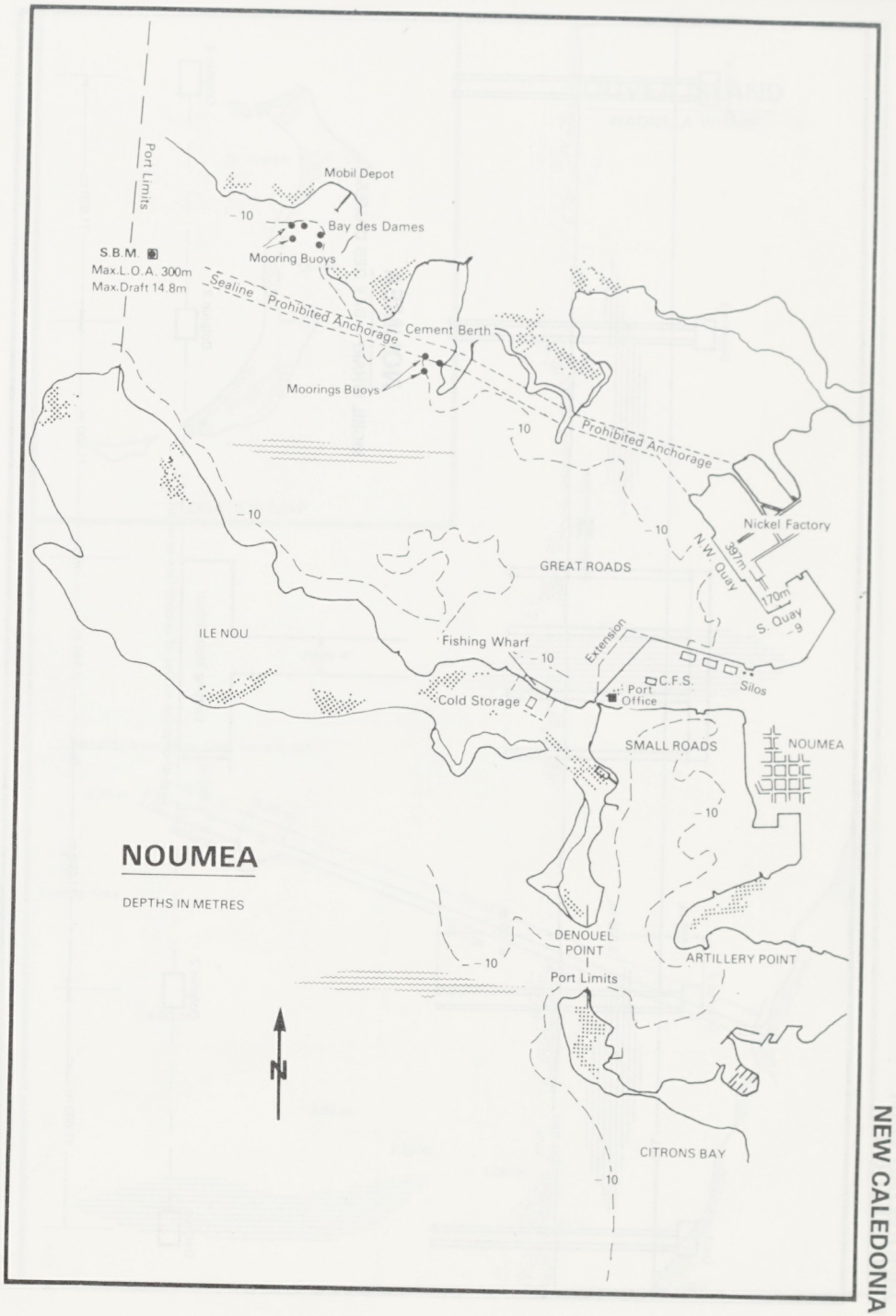

KOUAOUA
MOORING DIAGRAM
11
10
9
9
8
7
6
Buoy
N
DEPTHS IN METRES

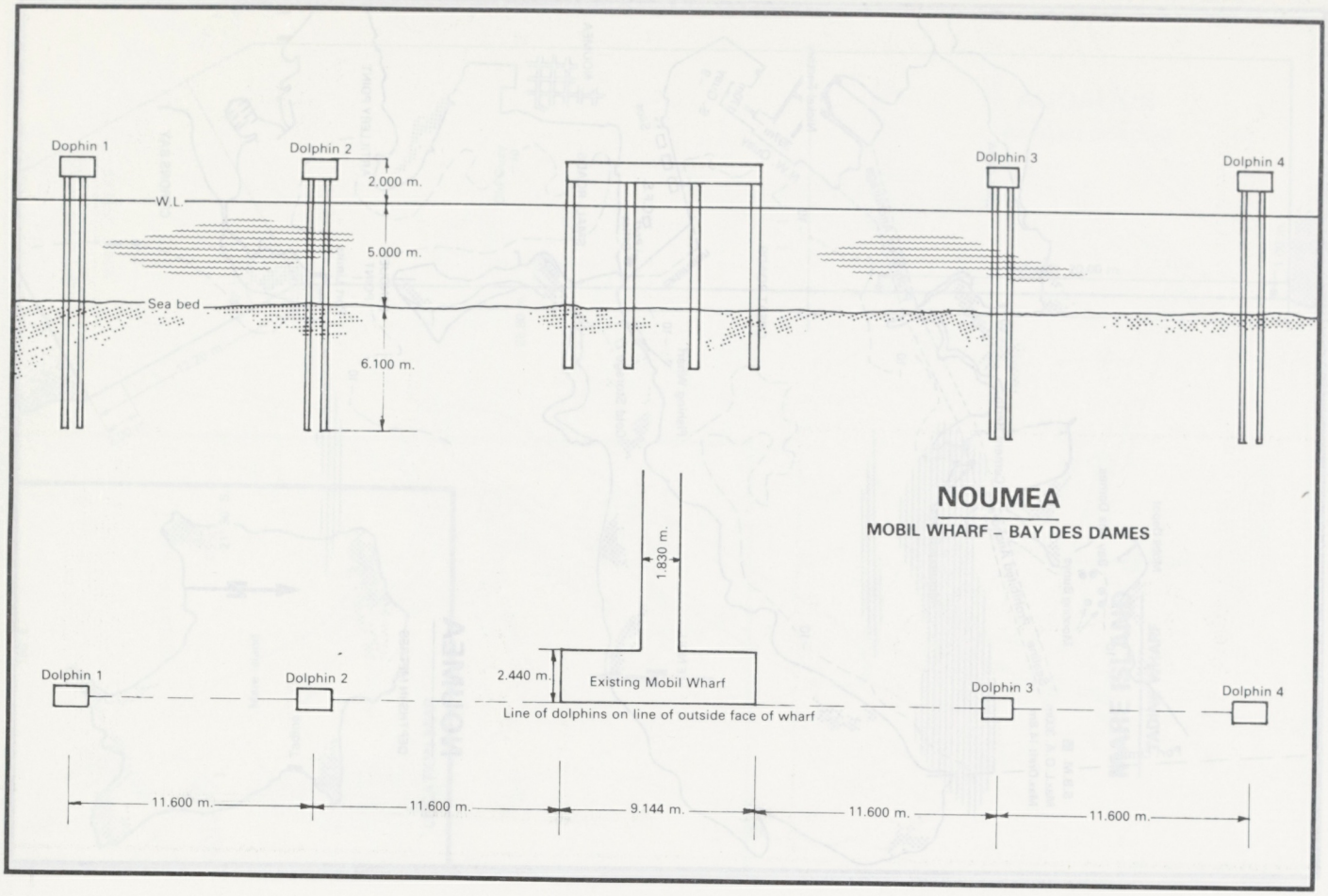

LIFOU ISLAND
WE WHARF
LOCATION MAP
21° S.
167° E.
We
Chepenehe
Infill Area
Rock retaining wall
Connecting Bridge
4.00 m.
Duke of Alba
Bollards
Wharf
40.00 m
28 m
12
15
7.00 m.
N


Old Quay
New Quay
Bollards 20.00 m.
1.00 m.
30°
12.20 m.
2.00 m.
25.80 m.
24.60 m.
N
MARE ISLAND
TADINE WHARF
LOCATION MAP
168° E.
21° 30' S.
Mare Island
Tadine


10
N
10
11
10.2
NEPOUI
MOORING DIAGRAM
Buoy
DEPTHS IN METRES

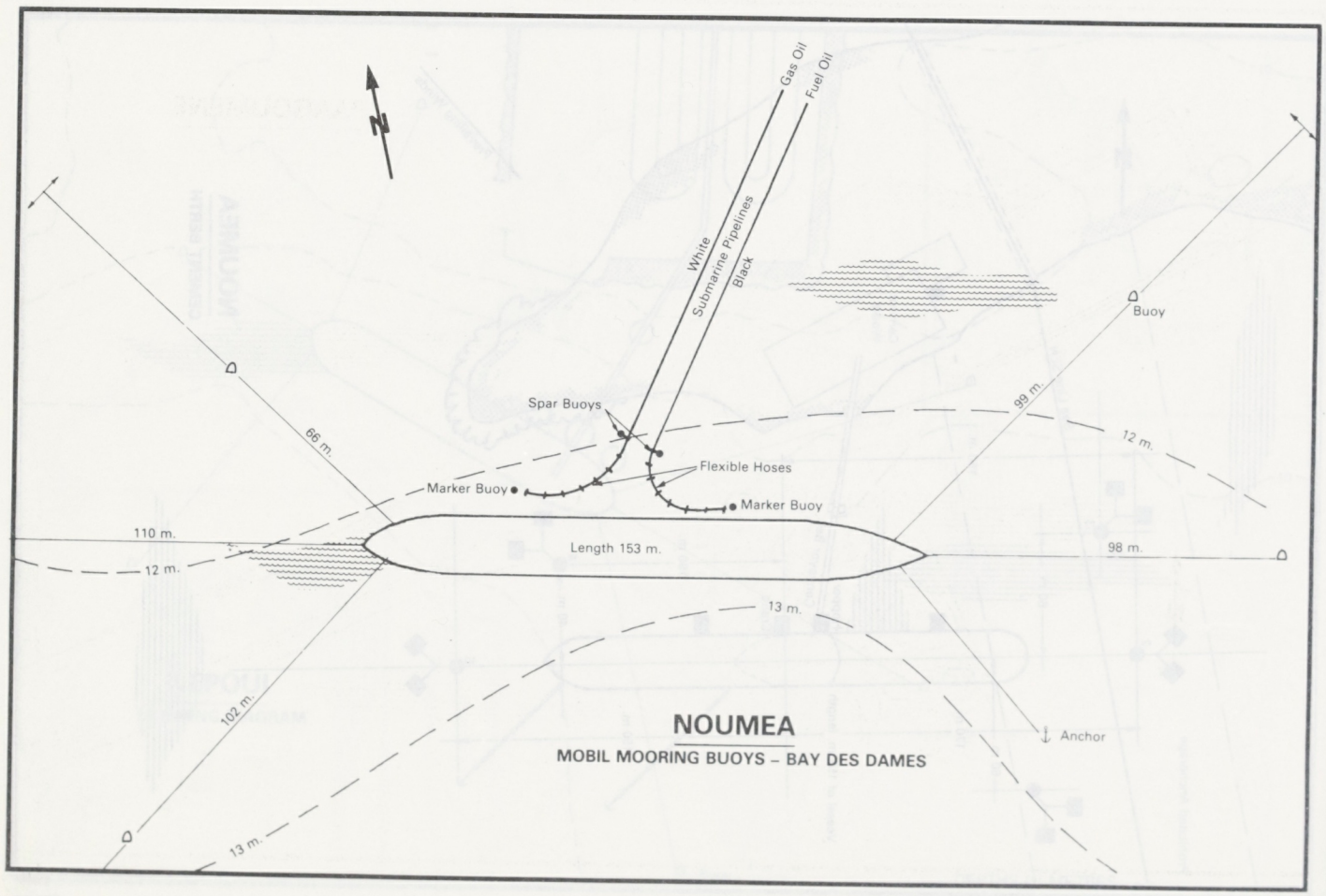

Prohibited Anchorage
2
3
Sea Line SLN
60 m.
60 m.
170 m.
150 m.
Cement Works
Vessel of 155 m. length
Hopper
Conveyor Belt
Crane
100 m.
150 m.
40 m.
4
5
Prevailing Winds
NOUMEA
CEMENT BERTH


Port Limits
Mobil Depot
10
Bay des Dames
Mooring Buoys
S.B.M.
Max.L.O.A. 300m
Max.Draft 14.8m
Sealine
Prohibited Anchorage
Cement Berth
Moorings Buoys
10
Prohibited Anchorage
10
10
Nickel Factory
NW Quay
397m
170m
S. Quay
9
GREAT ROADS
ILE NOU
Fishing Wharf
10
Extension
C.F.S.
Silos
Port Office
Cold Storage
SMALL ROADS
NOUMEA
10
NOUMEA
DEPTHS IN METRES
DENOUEL POINT
ARTILLERY POINT
10
Port Limits
N
CITRONS BAY
10



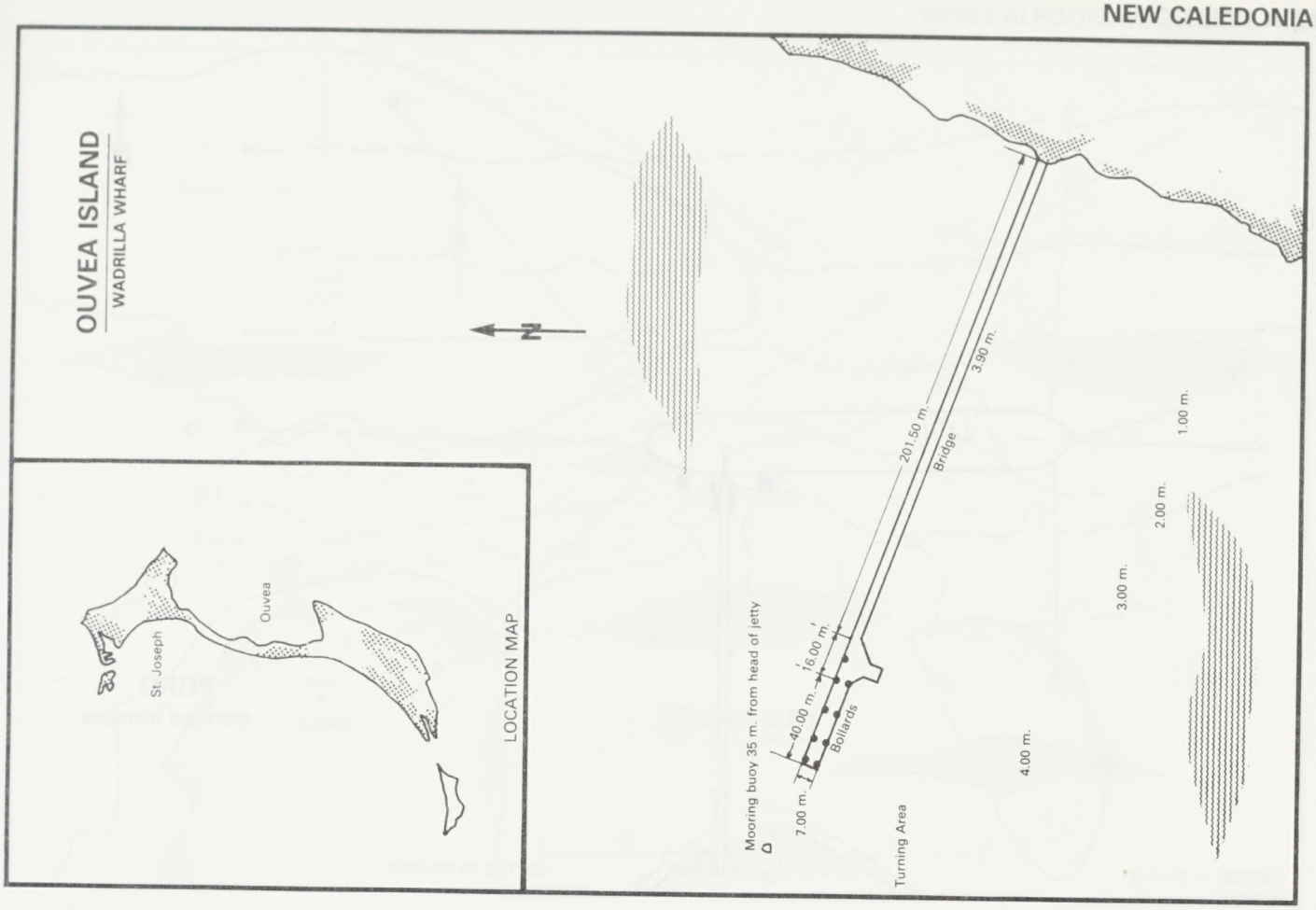
NOUMEA

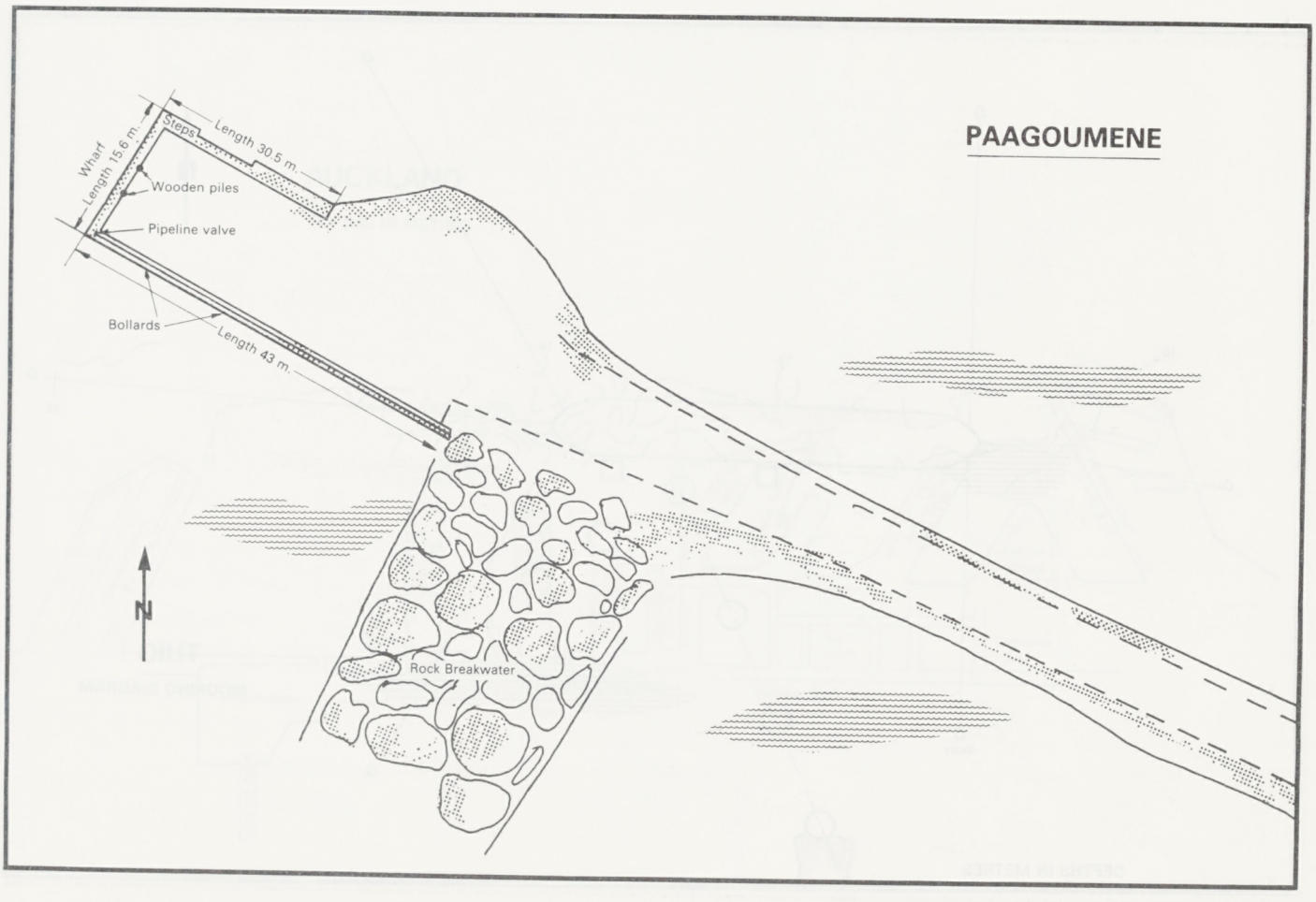
MOBIL WHARF – BAY DES DAMES

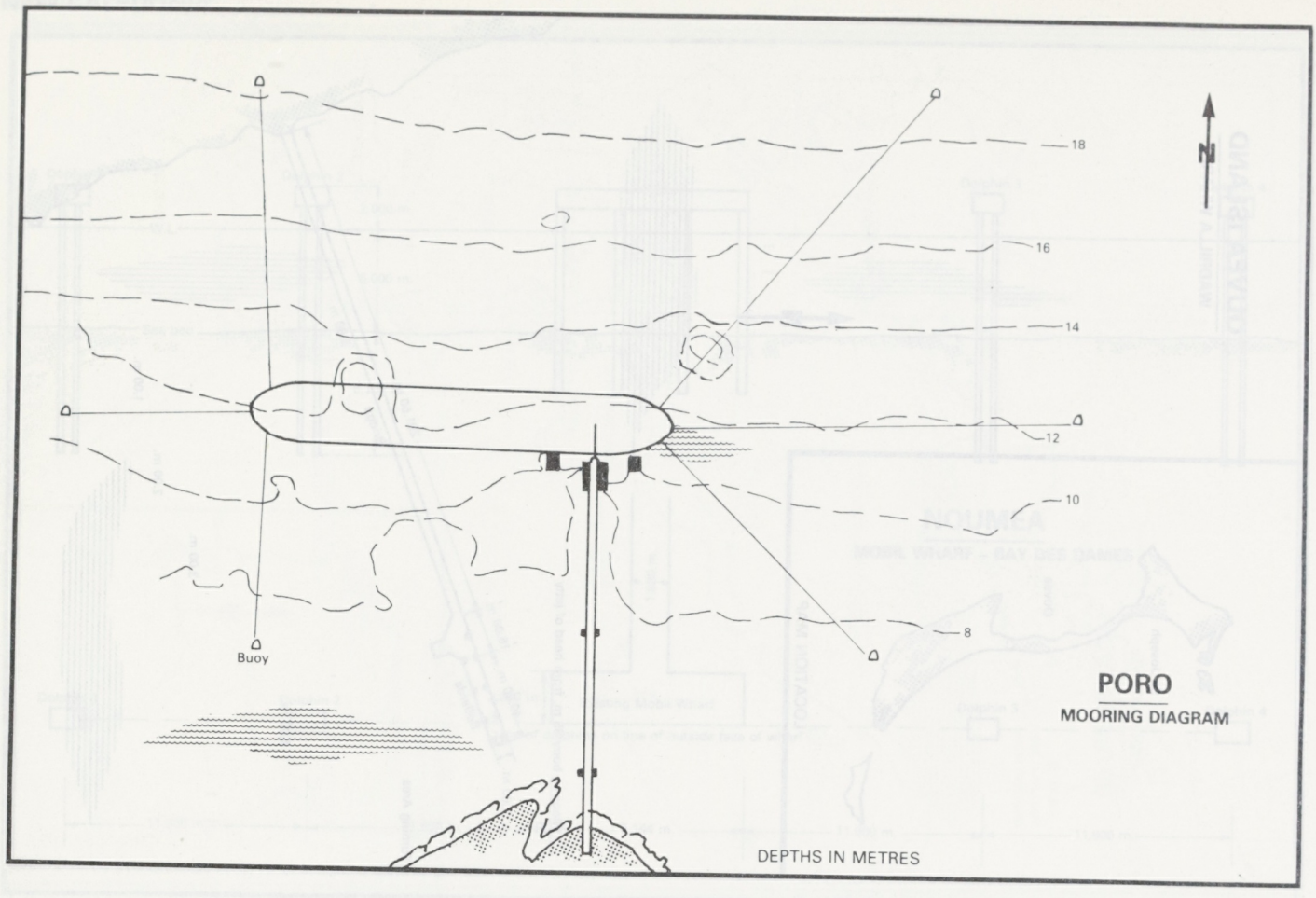


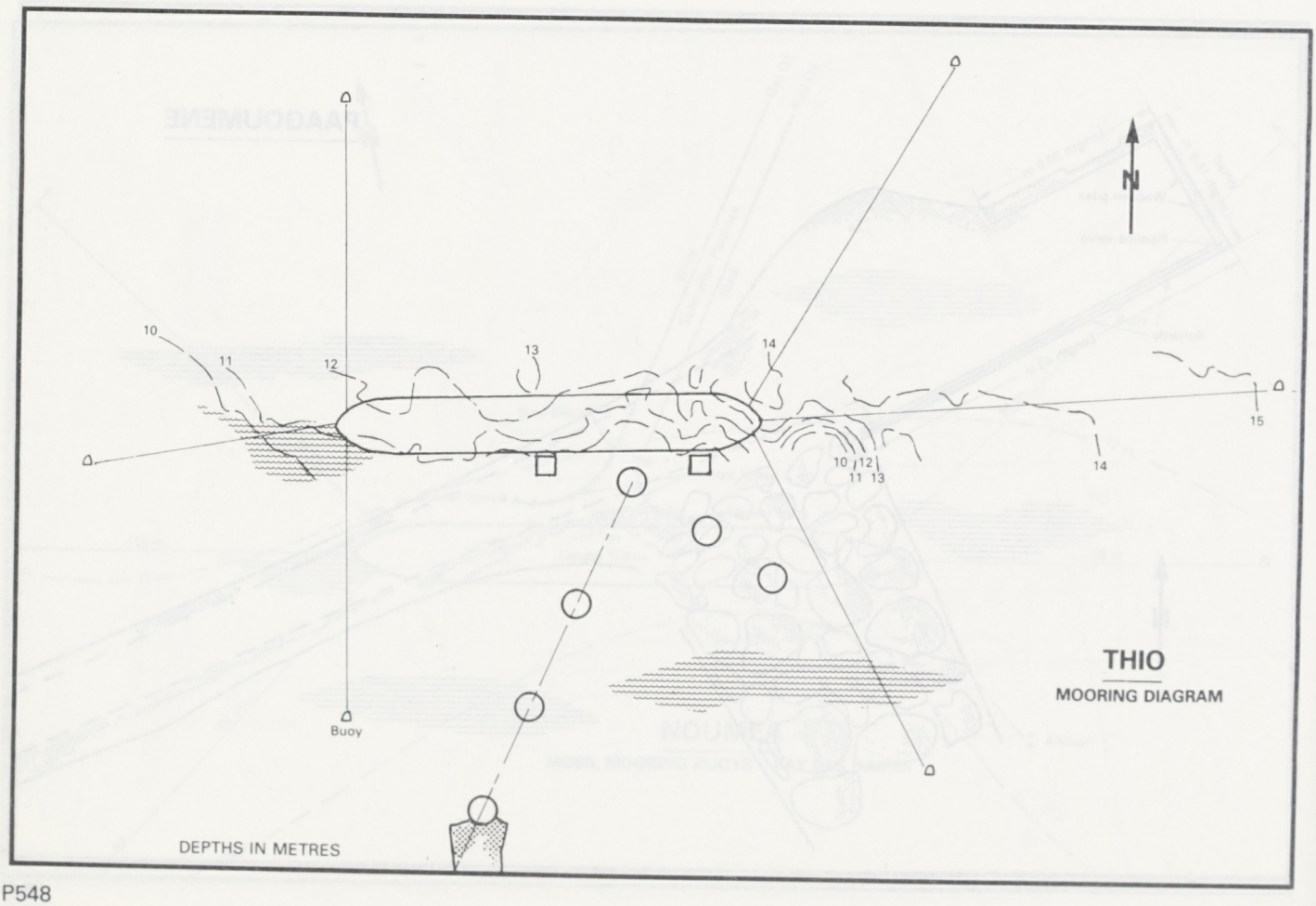
NOUMEA

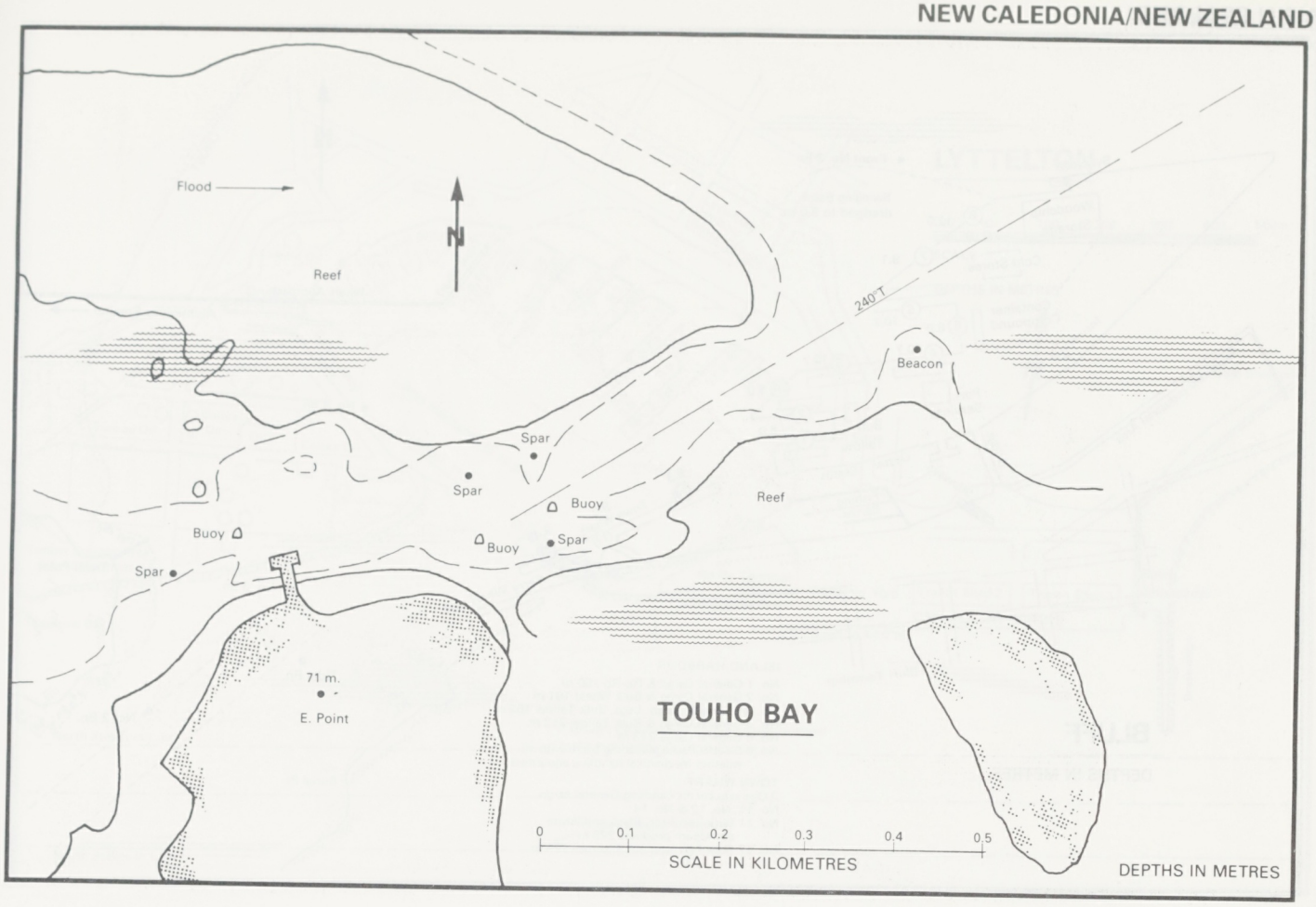
MOBIL MOORING BUOYS – BAY DES DAMES


OUVEA ISLAND
WADRILLA WHARF
N
LOCATION MAP
St. Joseph
Ouvea
Mooring buoy 35 m. from head of jetty
7.00 m.
40.00 m.
16.00 m.
Bollards
201.50 m.
Bridge
3.90 m.
Turning Area
4.00 m.
3.00 m.
2.00 m.
1.00 m.


PAAGOUMENE
Wharf
Length 15.6 m.
Steps
Length 30.5 m.
Wooden piles
Pipeline valve
Bollards
Length 43 m.
N
Rock Breakwater

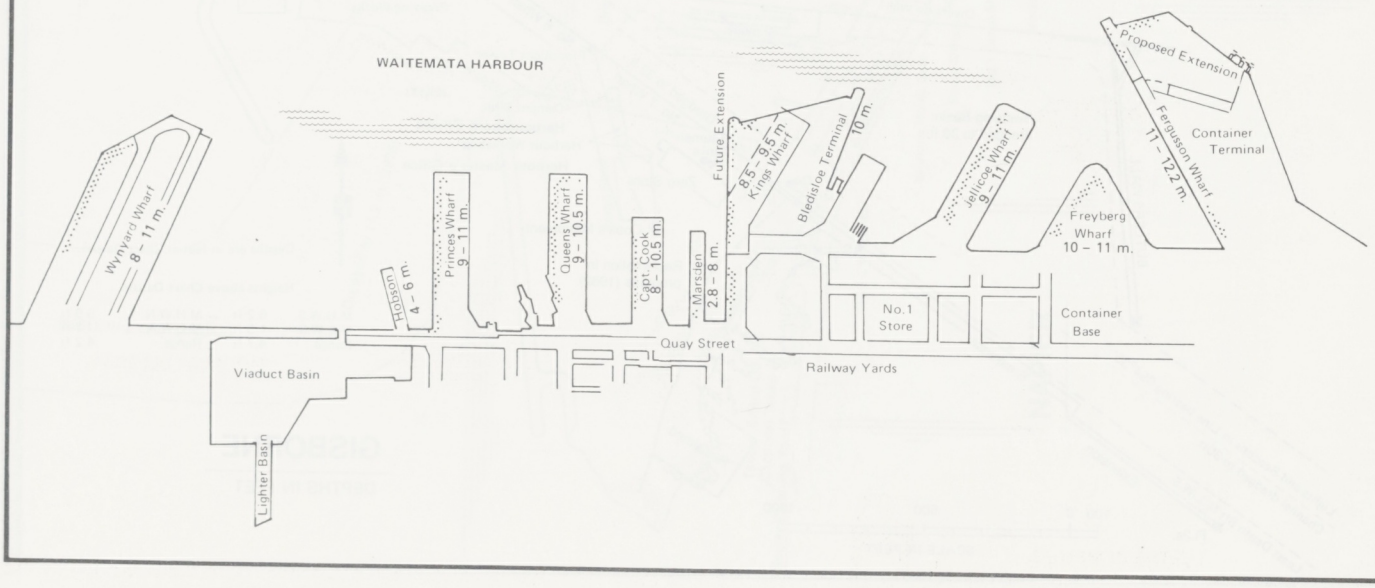

18
16
14
12
10
8
Buoy
N
PORO
MOORING DIAGRAM
DEPTHS IN METRES

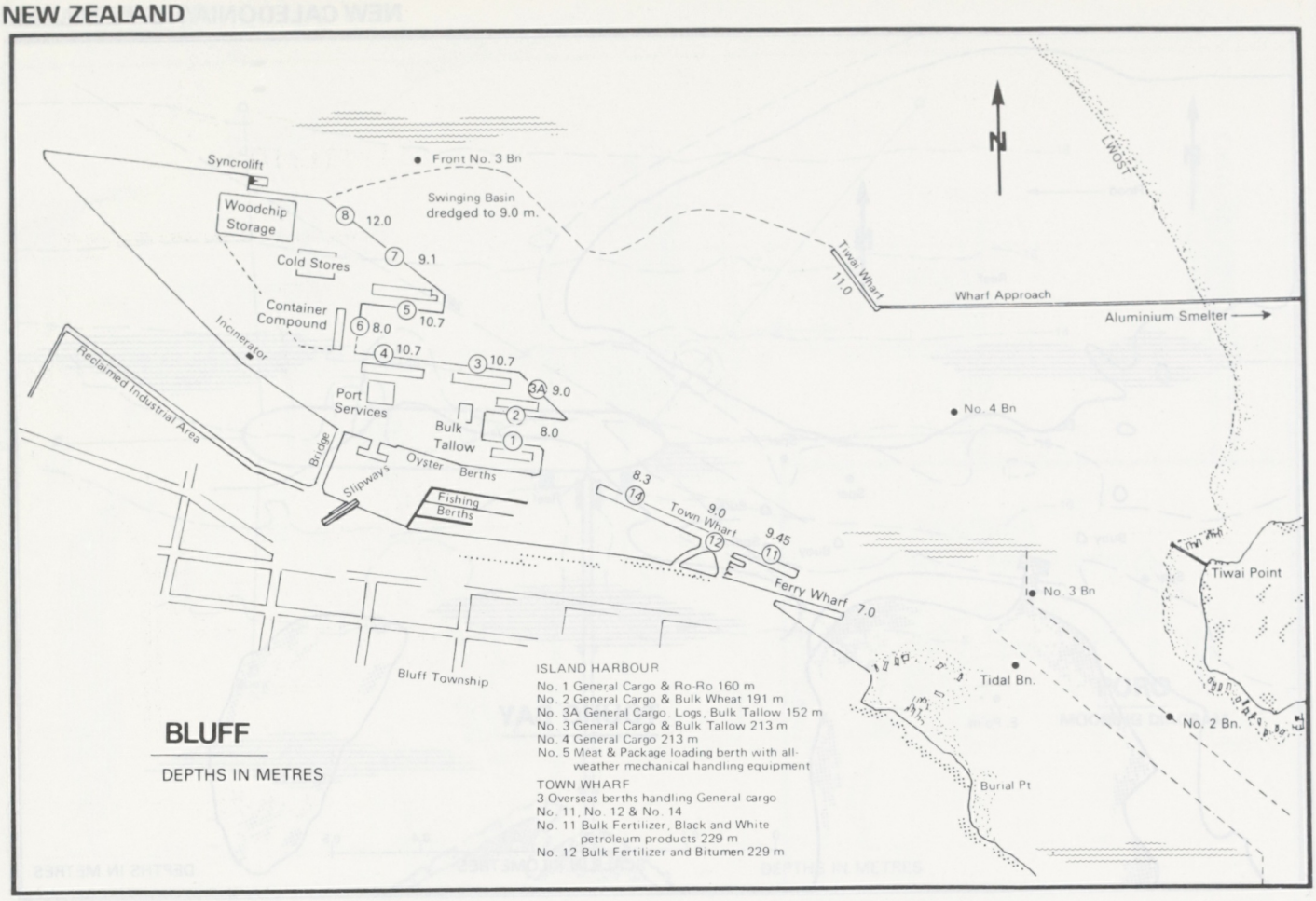

10
11
12
13
14
15
10 12
11 13
14
Buoy
N
THIO
MOORING DIAGRAM
DEPTHS IN METRES

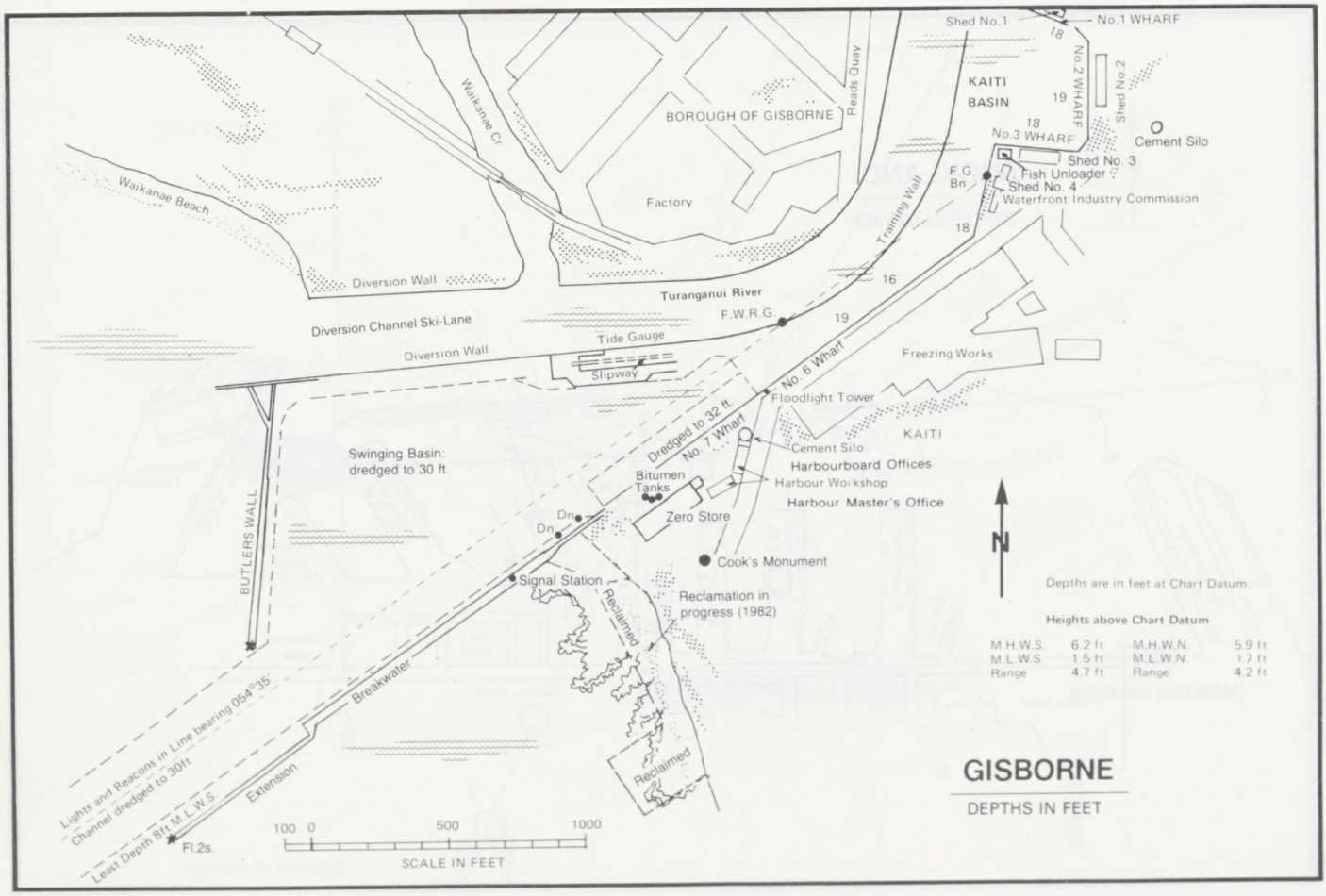


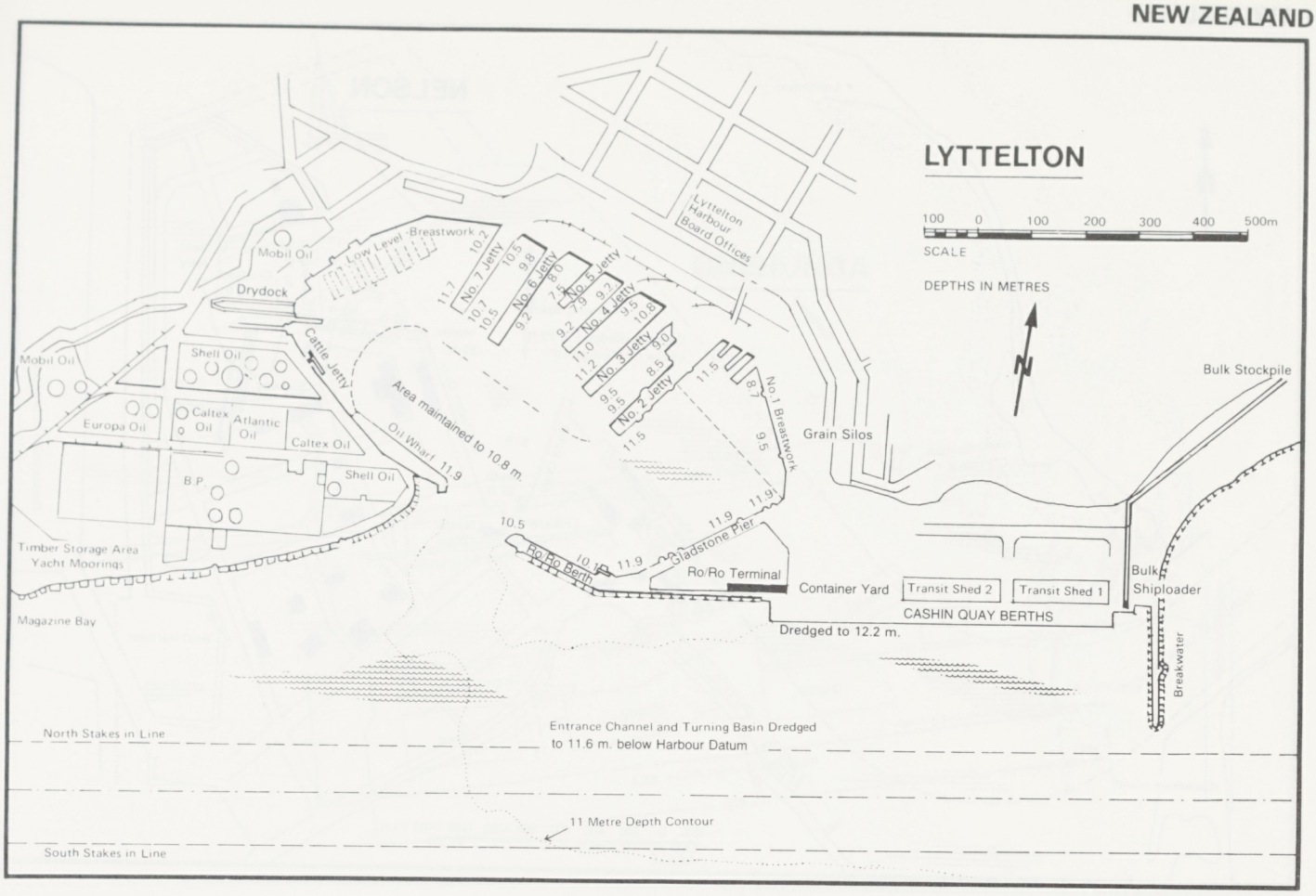
AUCKLAND

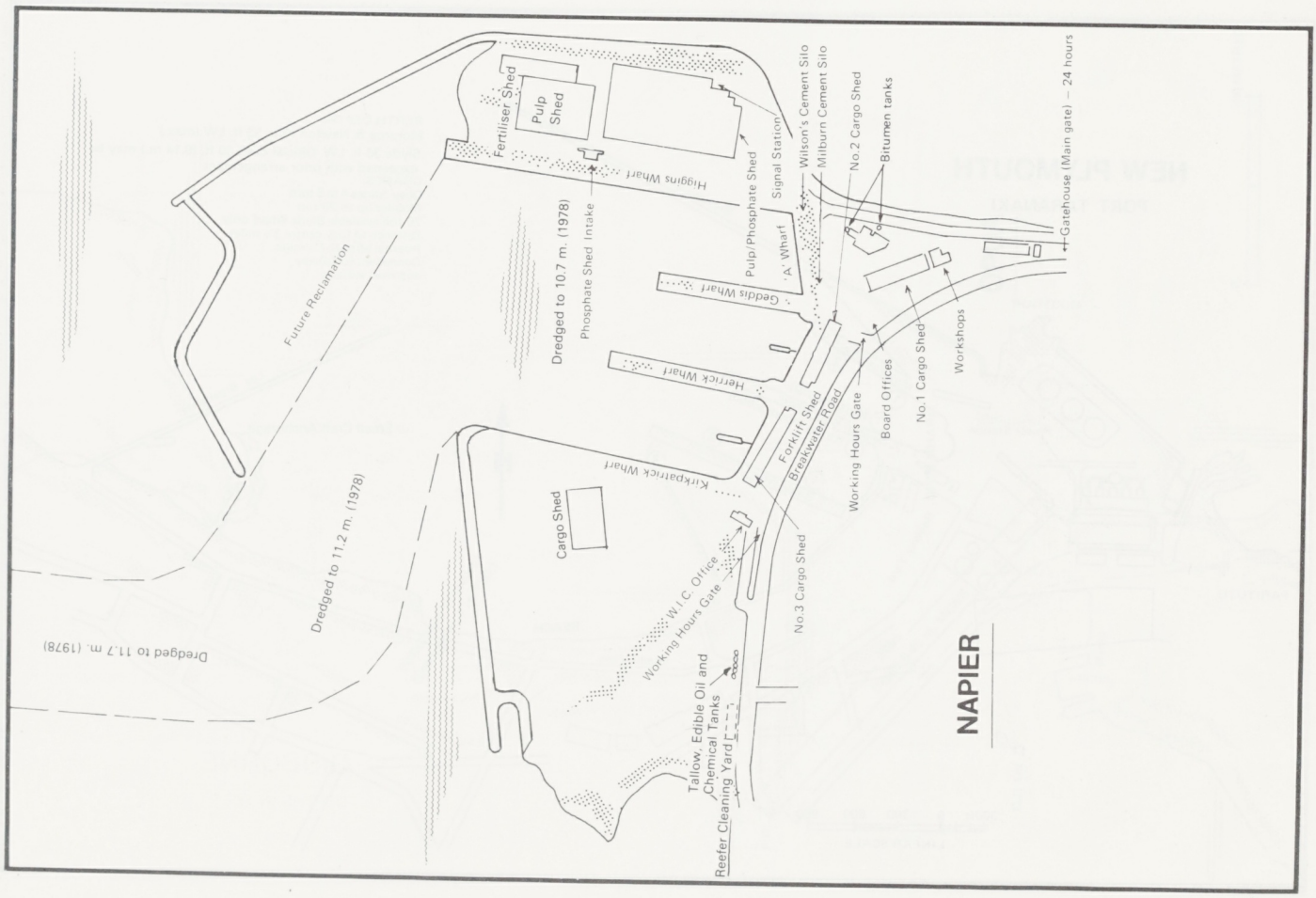
DEPTHS IN METRES

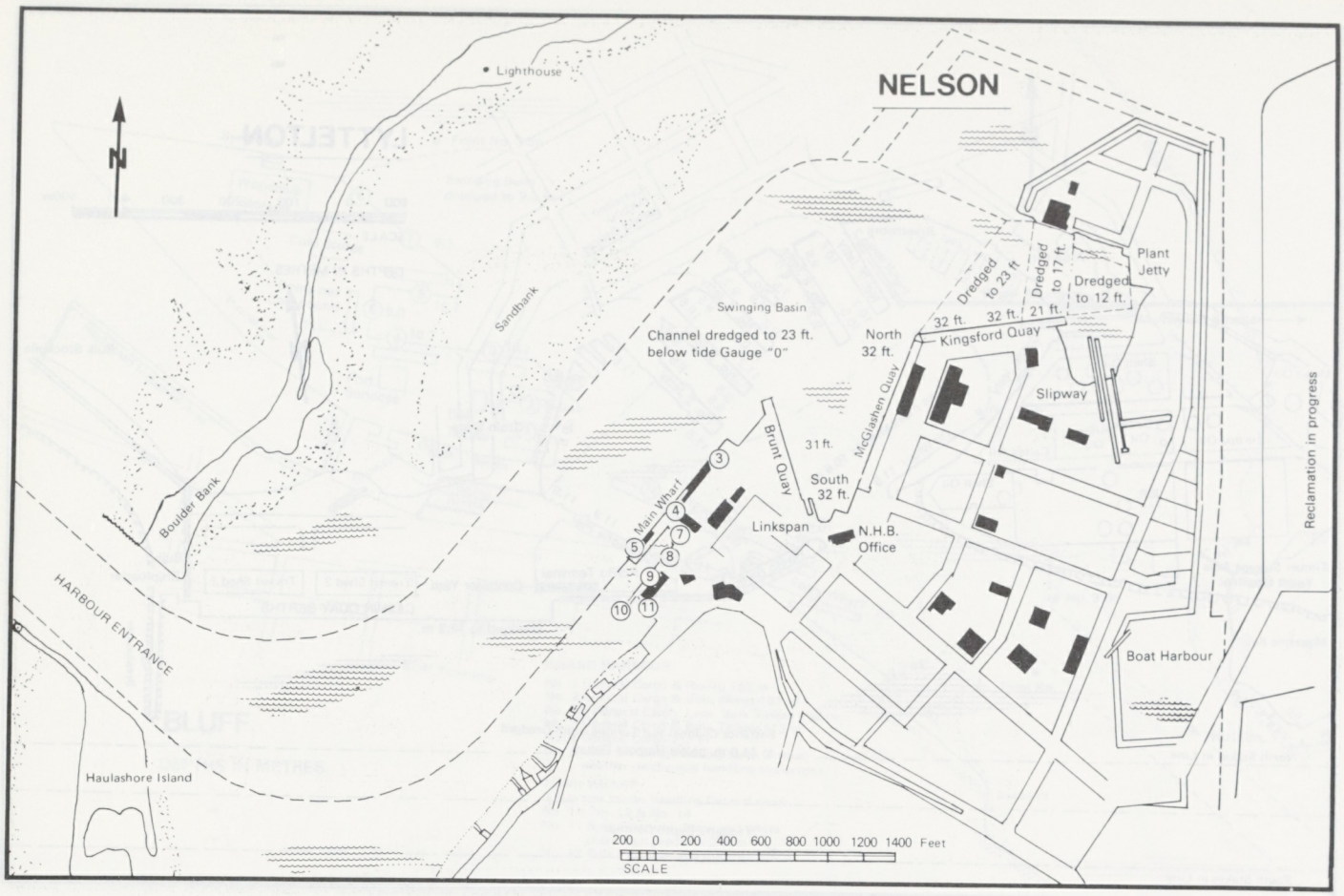


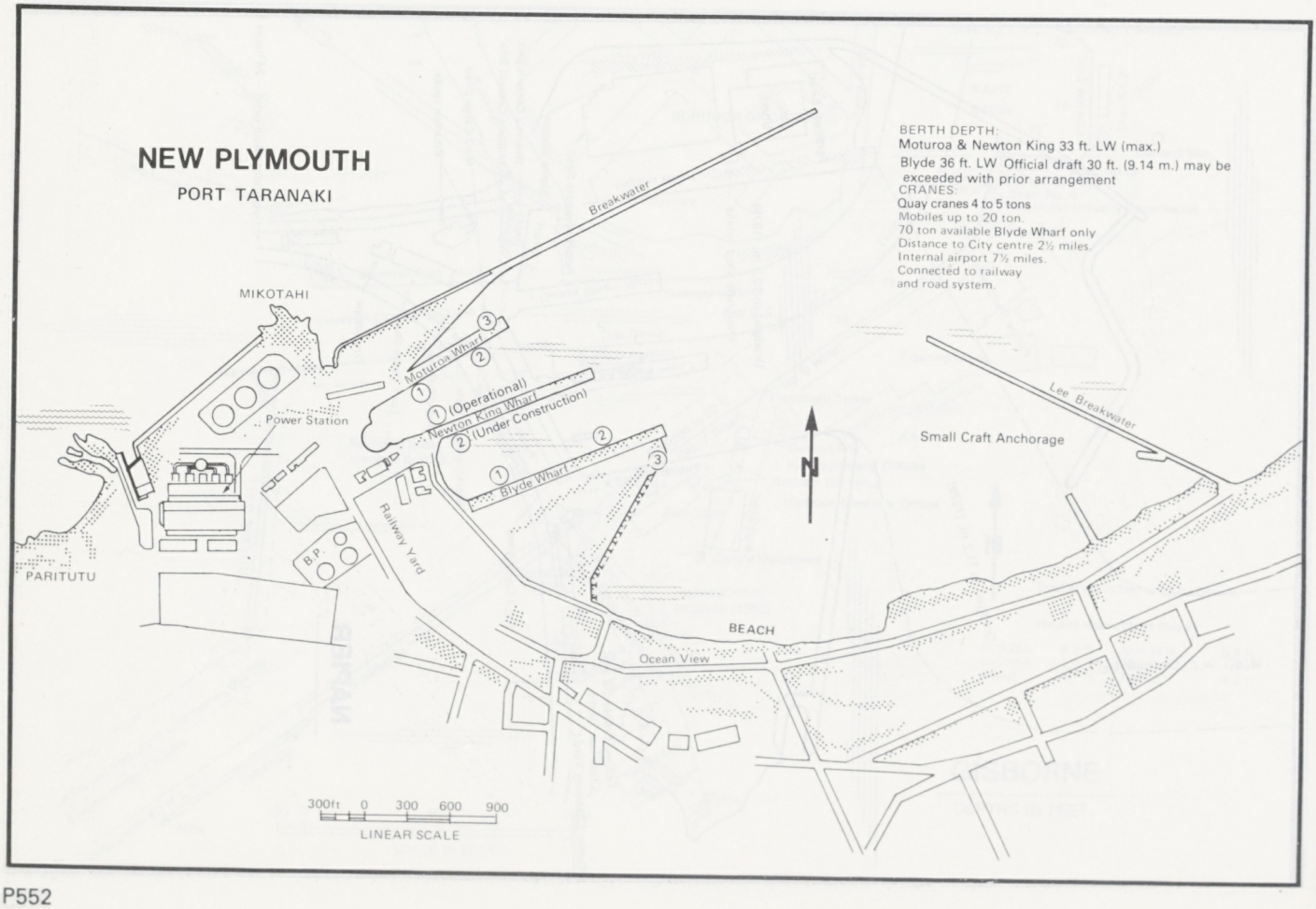

Syncrolift
Front No. 3 Bn
Swinging Basin dredged to 9.0 m.
Woodchip Storage
8 12.0
Cold Stores
7 9.1
Container Compound
6 8.0
5 10.7
4 10.7
3 10.7
3A 9.0
2
1 8.0
Incinerator
Reclaimed Industrial Area
Port Services
Bulk Tallow
Bridge
Slipways
Oyster Berths
Fishing Berths
Bluff Township
14 8.3
Town Wharf
12 9.0
11 9.45
Ferry Wharf 7.0
Tiwai Wharf
11.0
Wharf Approach
Aluminium Smelter
LWOST
No. 4 Bn
No. 3 Bn
Tiwai Point
Tidal Bn.
No. 2 Bn.
Burial Pt
N
ISLAND HARBOUR
No. 1 General Cargo & Ro-Ro 160 m
No. 2 General Cargo & Bulk Wheat 191 m
No. 3A General Cargo, Logs, Bulk Tallow 152 m
No. 3 General Cargo & Bulk Tallow 213 m
No. 4 General Cargo 213 m
No. 5 Meat & Package loading berth with all-weather mechanical handling equipment
TOWN WHARF
3 Overseas berths handling General cargo
No. 11, No. 12 & No. 14
No. 11 Bulk Fertilizer, Black and White petroleum products 229 m
No. 12 Bulk Fertilizer and Bitumen 229 m
BLUFF
DEPTHS IN METRES

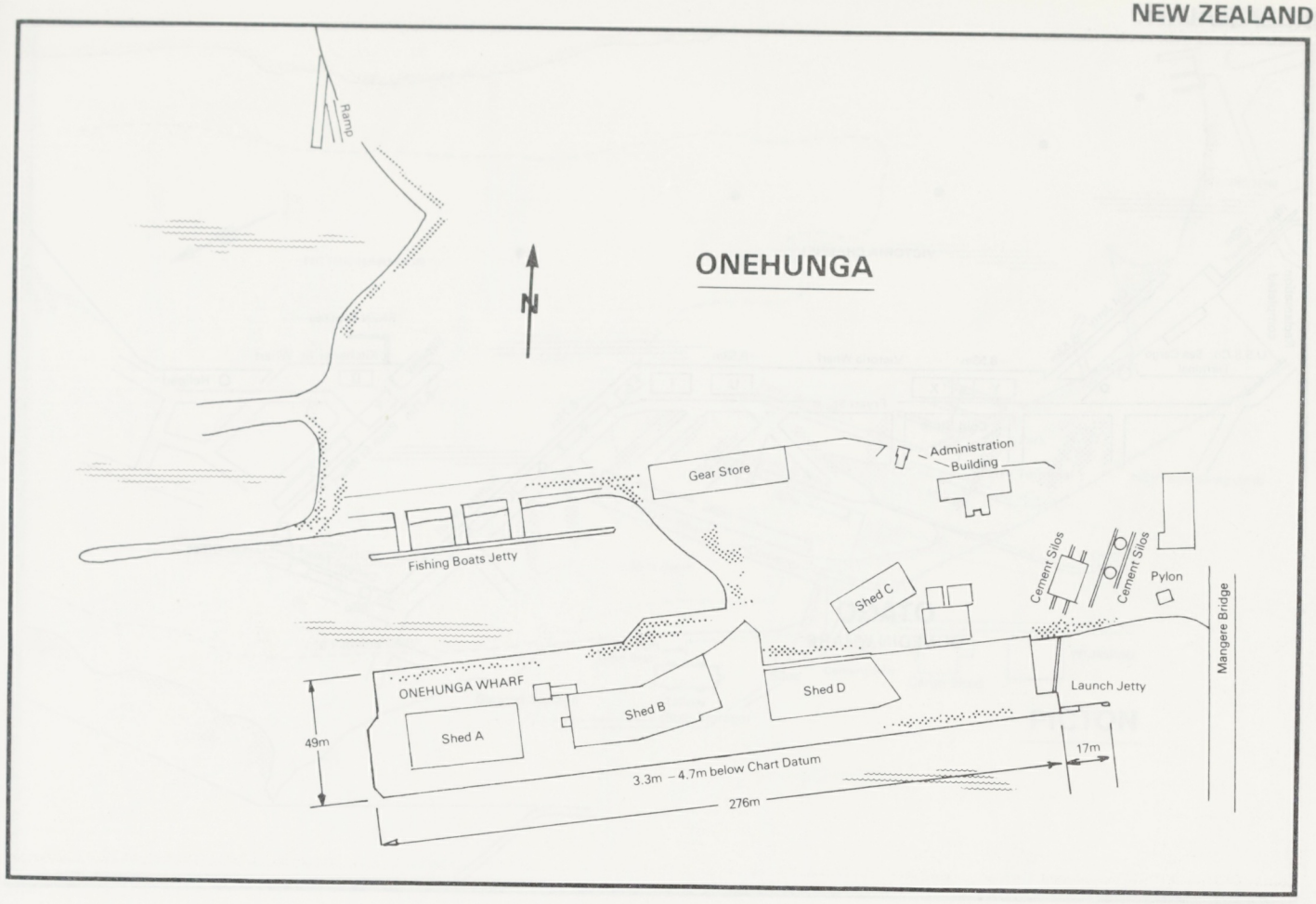

Shed No.1
No.1 WHARF
18
No.2 WHARF
Shed No.2
KAITI BASIN
19
18
No.3 WHARF
Cement Silo
Shed No. 3
F.G. Bn
Fish Unloader
Shed No. 4
Waterfront Industry Commission
18
Walkanae Cr
BOROUGH OF GISBORNE
Reads Quay
Walkanae Beach
Factory
Training Wall
Diversion Wall
Turanganui River
16
Diversion Channel Ski-Lane
F.W.R.G.
19
Diversion Wall
Tide Gauge
Slipway
No. 6 Wharf
Freezing Works
Floodlight Tower
Dredged to 32 ft.
No. 1 Wharf
KAITI
Cement Silo
Harbourboard Offices
Harbour Workshop
Harbour Master's Office
Swinging Basin: dredged to 30 ft.
Bitumen Tanks
Zero Store
Dn
Dn
BUTLERS WALL
Cook's Monument
Signal Station
Reclamation in progress (1982)
Reclaimed
Reclaimed
Breakwater
Extension
Lights and Beacons in Line bearing 054°35'
Channel dredged to 30ft
Least Depth 8ft M.L.W.S.
Fl.2s.
100 0 500 1000
SCALE IN FEET
N
Depths are in feet at Chart Datum.
Heights above Chart Datum
M.H.W.S. 6.2 ft
M.L.W.S. 1.5 ft
Range 4.7 ft
M.H.W.N. 5.9 ft
M.L.W.N. 1.7 ft
Range 4.2 ft
GISBORNE
DEPTHS IN FEET

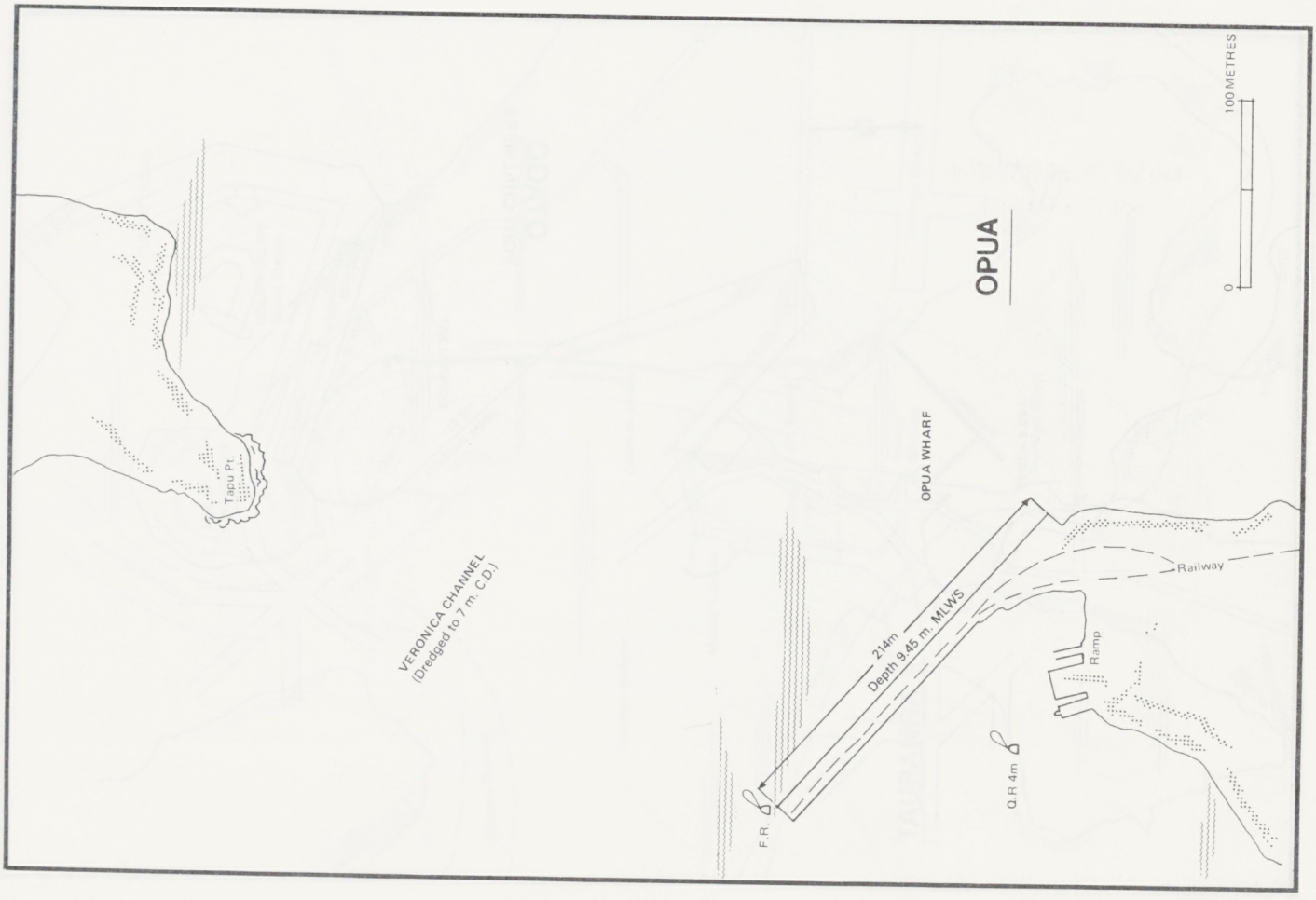

LYTTELTON
100 0 100 200 300 400 500m
SCALE
DEPTHS IN METRES
N
Lyttelton Harbour Board Offices
Low Level Breastwork
No. 7 Jetty
No. 6 Jetty
No. 5 Jetty
No. 4 Jetty
No. 3 Jetty
No. 2 Jetty
No. 1 Breastwork
Mobil Oil
Drydock
Cattle Jetty
Shell Oil
Europa Oil
Caltex Oil
Atlantic Oil
Caltex Oil
B.P.
Shell Oil
Oil Wharf
Area maintained to 10.8 m.
Timber Storage Area
Yacht Moorings
Magazine Bay
Grain Silos
Bulk Stockpile
Gladstone Pier
Ro/Ro Berth
Ro/Ro Terminal
Container Yard
Transit Shed 2
Transit Shed 1
CASHIN QUAY BERTHS
Dredged to 12.2 m.
Bulk Shiploader
Breakwater
North Stakes in Line
Entrance Channel and Turning Basin Dredged to 11.6 m. below Harbour Datum
11 Metre Depth Contour
South Stakes in Line

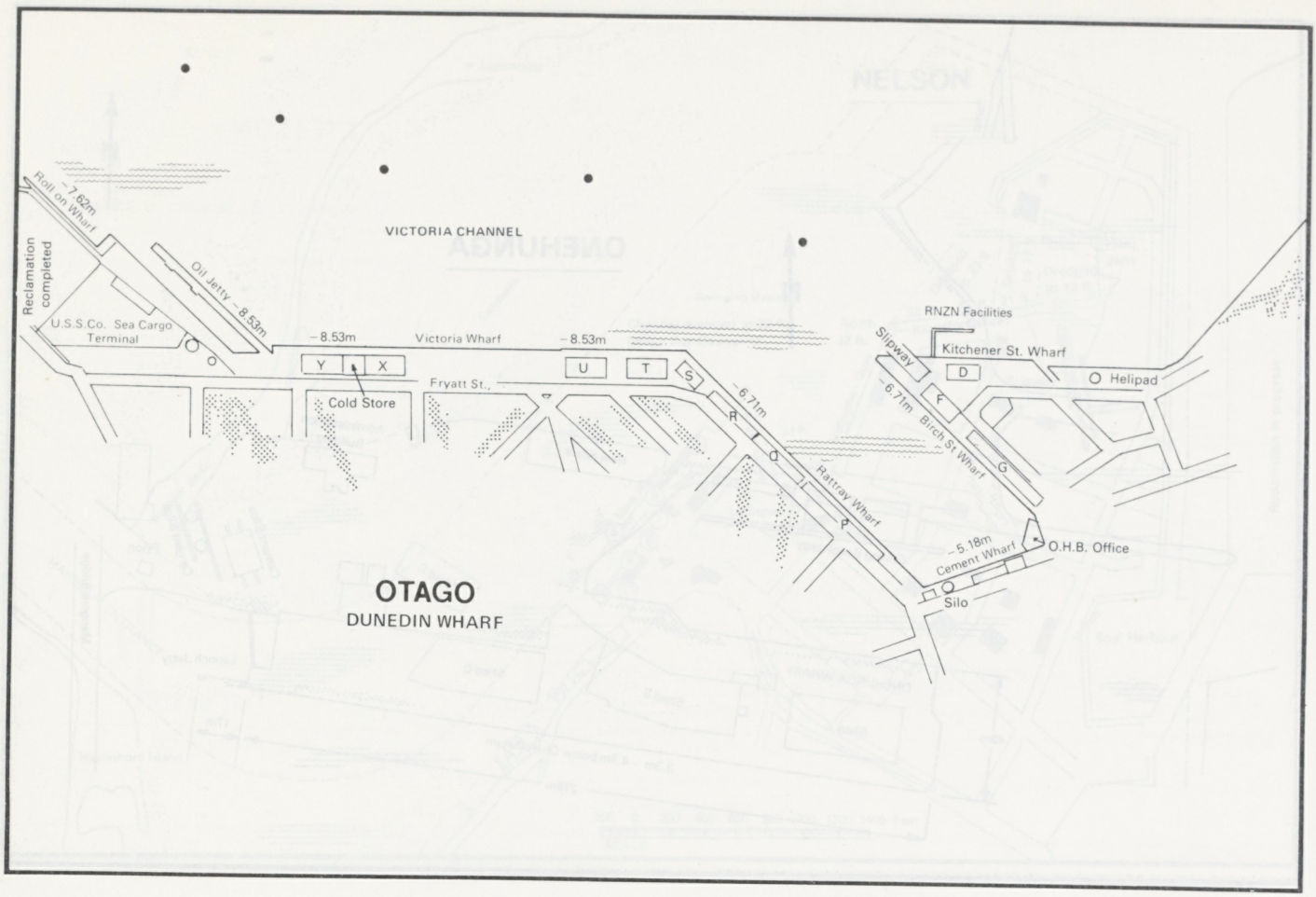

NAPIER
Fertiliser Shed
Pulp Shed
Higgins Wharf
Signal Station
Wilson's Cement Silo
Milburn Cement Silo
No.2 Cargo Shed
Bitumen tanks
Gatehouse (Main gate) — 24 hours
Future Reclamation
Dredged to 10.7 m. (1978)
Phosphate Shed Intake
Pulp/Phosphate Shed
'A' Wharf
Geddis Wharf
Herrick Wharf
Kirkpatrick Wharf
Dredged to 11.2 m. (1978)
Dredged to 11.7 m. (1978)
Cargo Shed
W.I.C. Office
Working Hours Gate
Tallow, Edible Oil and Chemical Tanks
Reefer Cleaning Yard
No.3 Cargo Shed
Forklift Shed
Breakwater Road
Working Hours Gate
Board Offices
No.1 Cargo Shed
Workshops

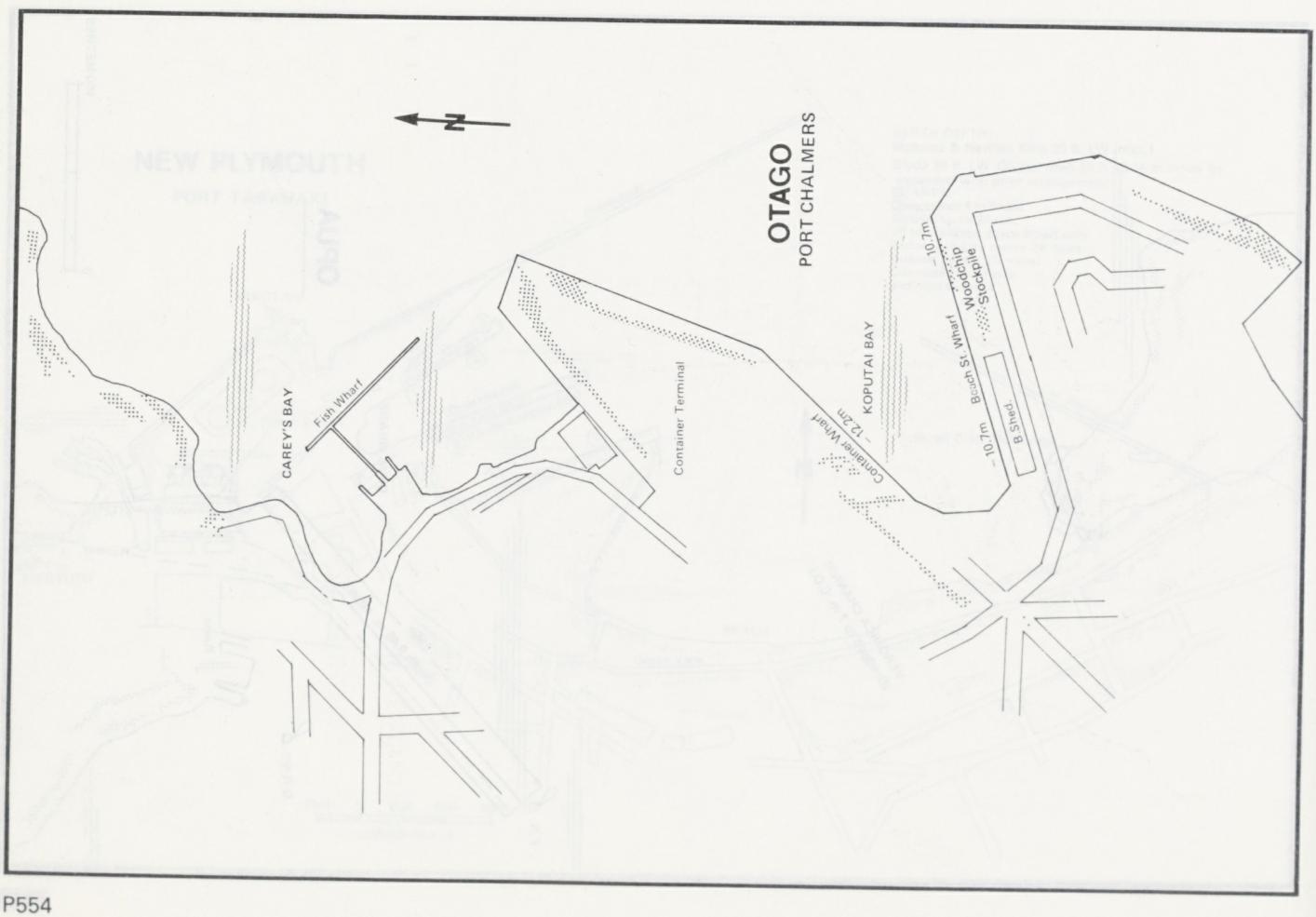

NELSON
Lighthouse
N
Sandbank
Boulder Bank
HARBOUR ENTRANCE
Haulashore Island
Swinging Basin
Channel dredged to 23 ft.
below tide Gauge "0"
Dredged to 23 ft.
Dredged to 17 ft.
Dredged to 12 ft.
Plant Jetty
32 ft.
32 ft.
21 ft.
North 32 ft.
Kingsford Quay
Slipway
McGlashen Quay
Brunt Quay
31 ft.
South 32 ft.
Main Wharf
Linkspan
N.H.B. Office
Boat Harbour
Reclamation in progress
200 0 200 400 600 800 1000 1200 1400 Feet
SCALE


NEW PLYMOUTH
PORT TARANAKI
BERTH DEPTH:
Moturoa & Newton King 33 ft. LW (max.)
Blyde 36 ft. LW Official draft 30 ft. (9.14 m.) may be exceeded with prior arrangement
CRANES:
Quay cranes 4 to 5 tons
Mobiles up to 20 ton.
70 ton available Blyde Wharf only
Distance to City centre 2½ miles.
Internal airport 7½ miles.
Connected to railway and road system.
Breakwater
MIKOTAHI
Moturoa Wharf
(Operational)
Newton King Wharf
(Under Construction)
Power Station
Blyde Wharf
Railway Yard
BP
PARITUTU
Lee Breakwater
Small Craft Anchorage
N
BEACH
Ocean View
300ft 0 300 600 900
LINEAR SCALE


ONEHUNGA
N
Ramp
Gear Store
Administration Building
Fishing Boats Jetty
Shed C
Cement Silos
Cement Silos
Pylon
Mangere Bridge
ONEHUNGA WHARF
Shed A
Shed B
Shed D
Launch Jetty
49m
3.3m – 4.7m below Chart Datum
17m
276m

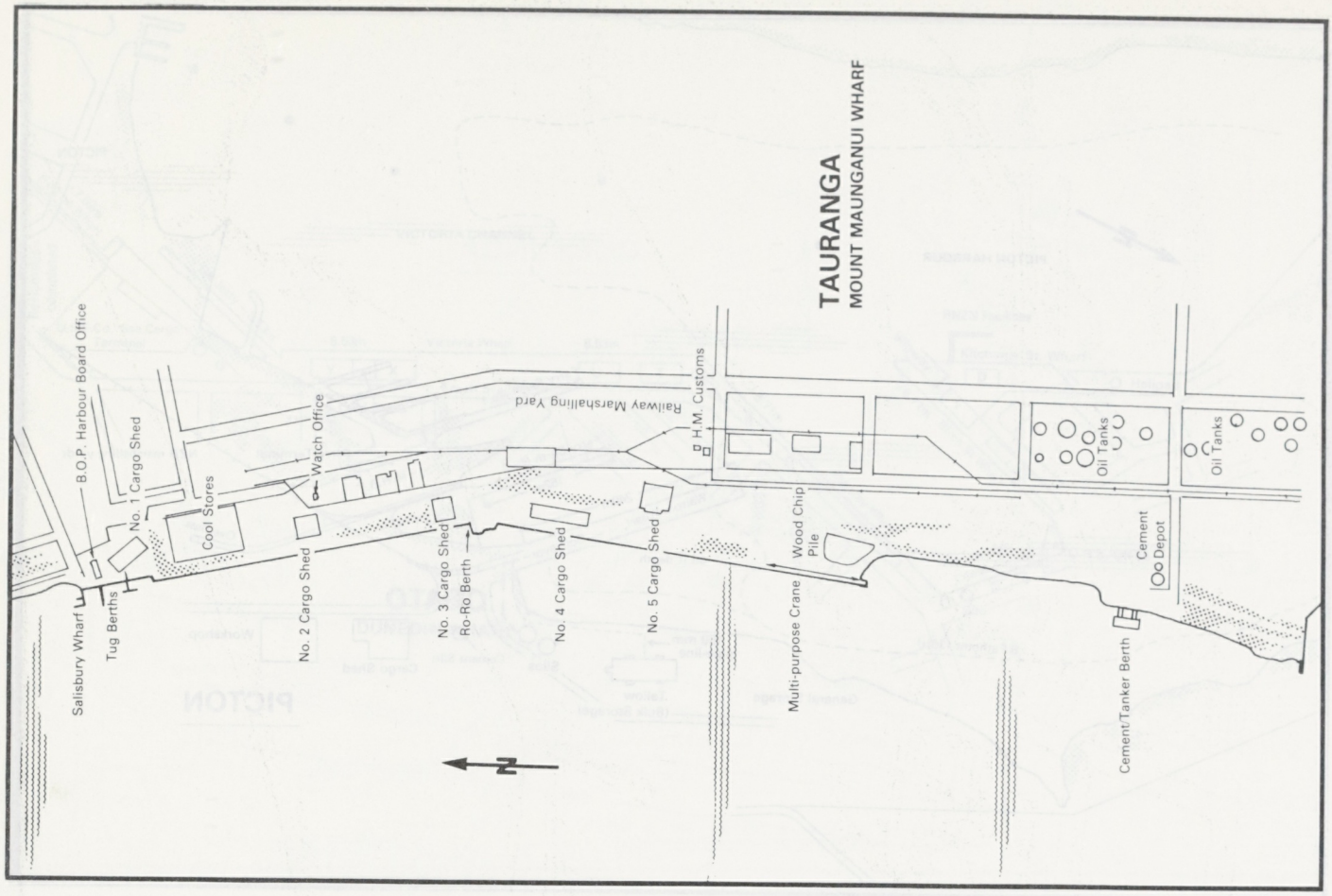

OPUA
100 METRES
0
Tapu Pt.
VERONICA CHANNEL
(Dredged to 7 m. C.D.)
OPUA WHARF
214m
Depth 9.45 m. MLWS
Railway
Ramp
Q.R 4m
F.R.

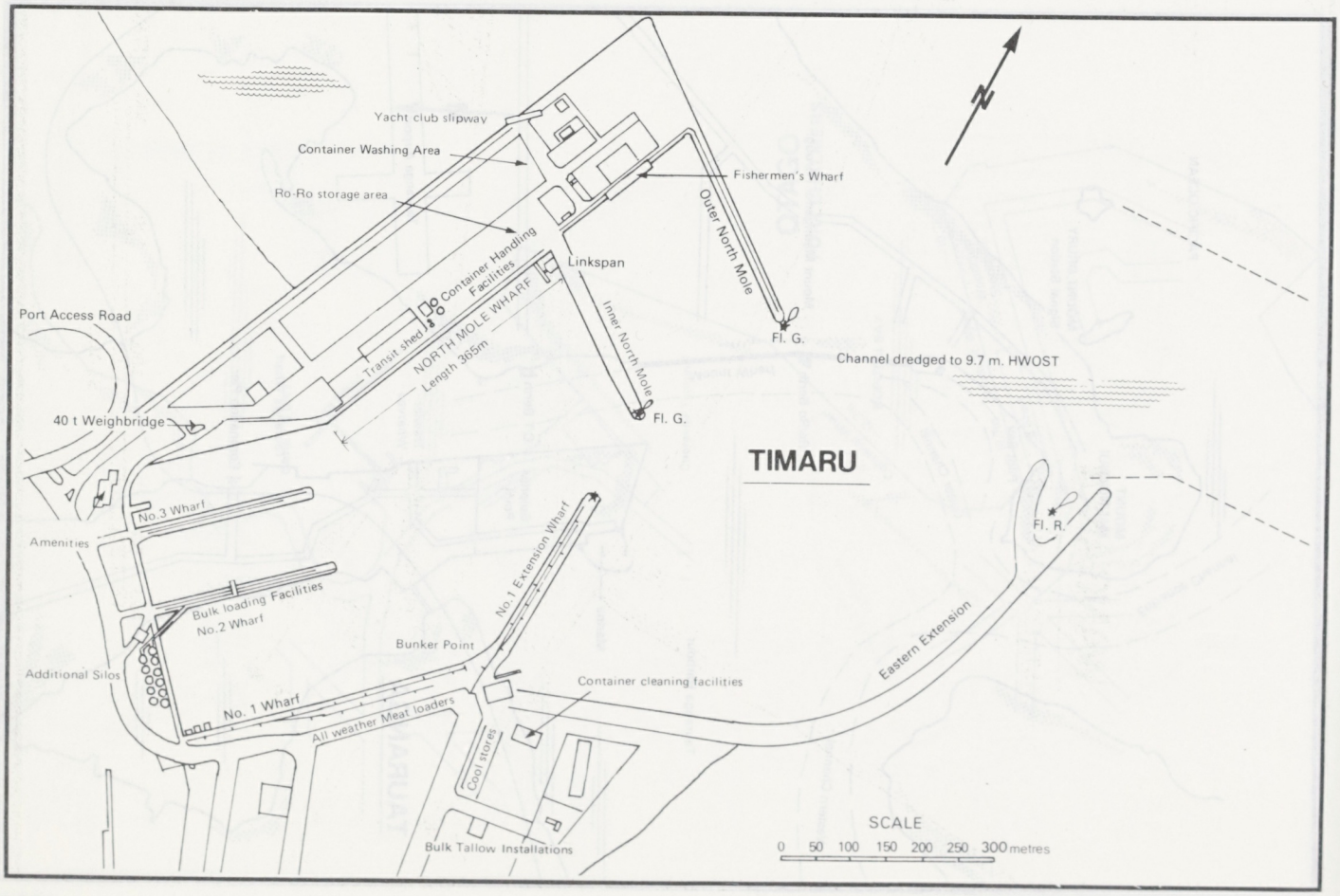

VICTORIA CHANNEL
Roll on Wharf
– 7.62m
Reclamation completed
U.S.S.Co. Sea Cargo Terminal
Oil Jetty – 8.53m
– 8.53m
Victoria Wharf
– 8.53m
Y
X
U
T
S
Cold Store
Fryatt St.,
– 6.71m
R
Rattray Wharf
RNZN Facilities
Slipway
Kitchener St. Wharf
D
Helipad
– 6.71m
Birch St. Wharf
G
– 5.18m
Cement Wharf
O.H.B. Office
Silo
OTAGO
DUNEDIN WHARF

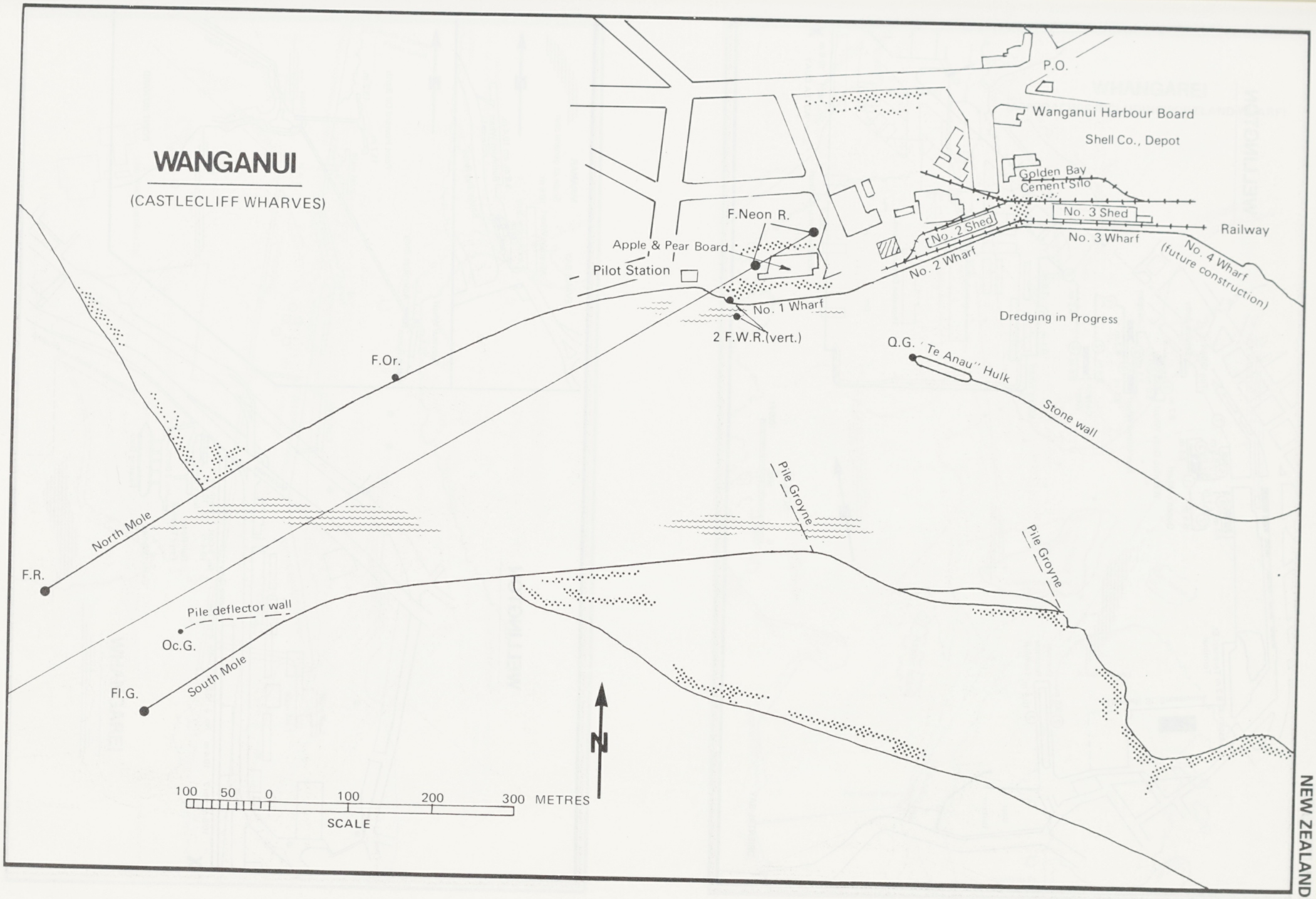

N
OTAGO
PORT CHALMERS
– 10.7m
Woodchip Stockpile
Beach St. Wharf
– 10.7m
B Shed
KOPUTAI BAY
– 12.2m
Container Wharf
Container Terminal
Fish Wharf
CAREY'S BAY

TAURANGA
PACIFIC OCEAN
Entrance Channel
MOUNT MAUNGANUI
MOUNT DRURY
Signal Station
Pilot Bay
Cutter Channel
Western Channel
Ro/Ro Berth
Mount Maunganui Borough
Mount Wharf
Tauranga Harbour
Marina
Sulphur Point
C/T Berth
Trawler Wharves
Tauranga Airport
Tauranga Wharf
Coronation Pier

NEW ZEALAND
PICTON
PICTON HARBOUR
6 Fathoms (36ft)
General Storage
150 mm pipe-line
Tallow (Bulk Storage)
35 ft depth
Warroh Wharf
240m
Conveyor
Ferry Berth No. 2
152m
Ferry Berth No. 1
Silos
Cement Silo
Cargo Shed
Workshop
M.H.B.
Ferry Terminal
Car Park
Overpass
NZR marshalling yards
PICTON

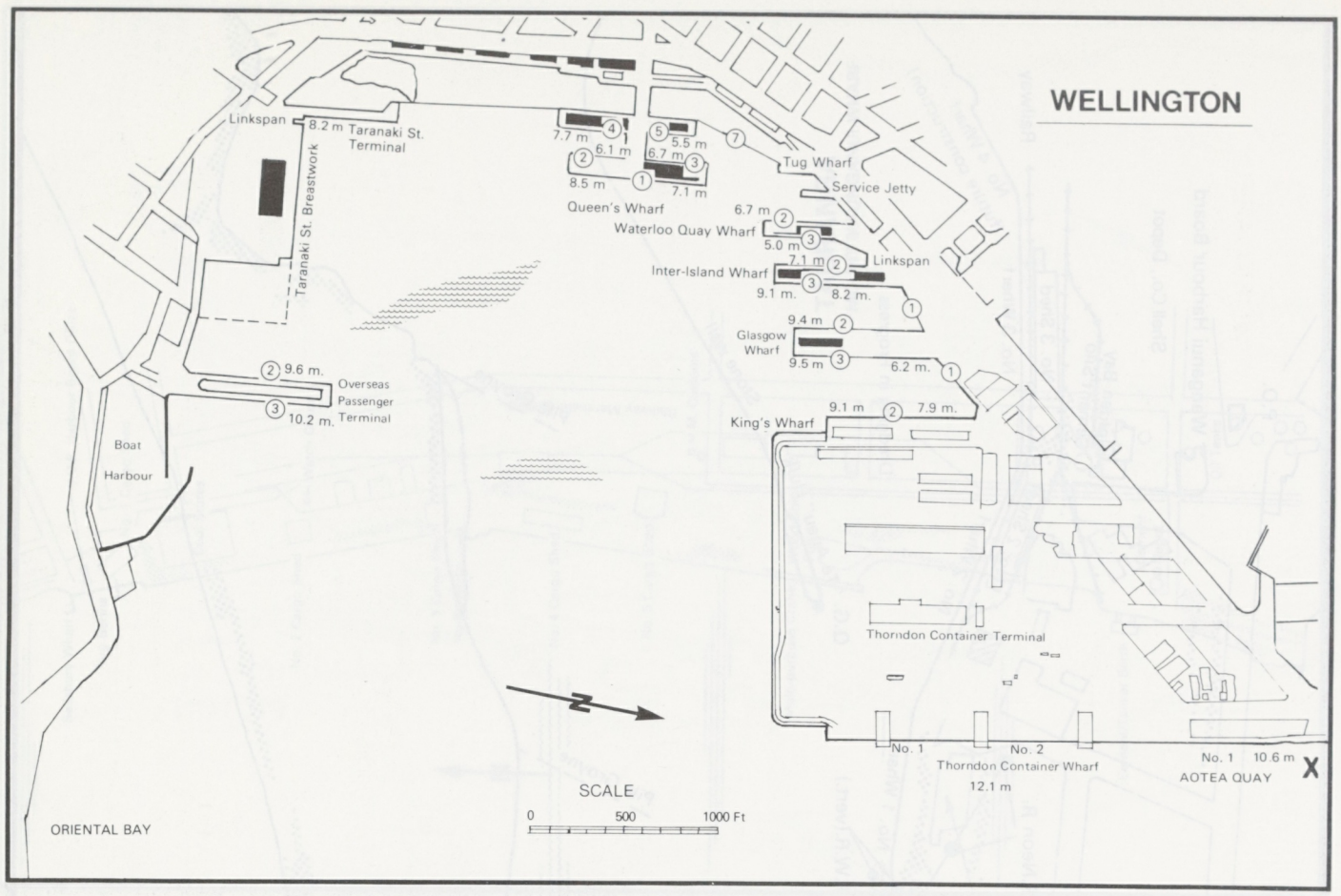

TAURANGA
MOUNT MAUNGANUI WHARF
B.O.P. Harbour Board Office
No. 1 Cargo Shed
Cool Stores
Watch Office
Railway Marshalling Yard
H.M. Customs
Oil Tanks
Oil Tanks
Salisbury Wharf
Tug Berths
No. 2 Cargo Shed
No. 3 Cargo Shed
Ro-Ro Berth
No. 4 Cargo Shed
No. 5 Cargo Shed
Wood Chip Pile
Cement Depot
Multi-purpose Crane
Cement/Tanker Berth
N

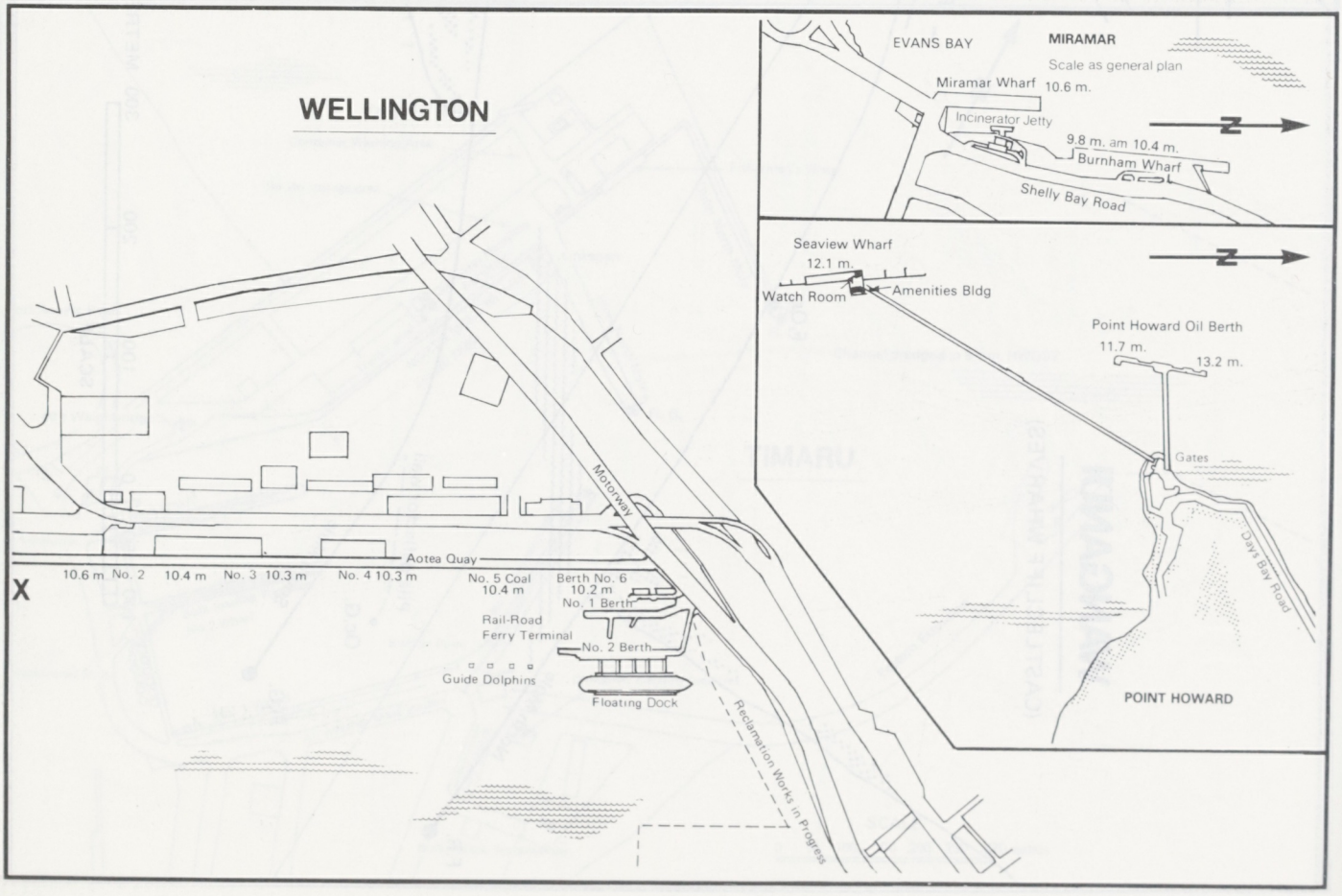

TIMARU
Yacht club slipway
Container Washing Area
Ro-Ro storage area
Fishermen's Wharf
Outer North Mole
Linkspan
Container Handling Facilities
Transit shed
NORTH MOLE WHARF
Length 365m
Inner North Mole
Fl. G.
Fl. G.
Channel dredged to 9.7 m. HWOST
Port Access Road
40 t Weighbridge
No.3 Wharf
Amenities
Bulk loading Facilities
No.2 Wharf
No.1 Extension Wharf
Bunker Point
Additional Silos
No. 1 Wharf
All weather Meat loaders
Cool stores
Container cleaning facilities
Eastern Extension
Fl. R.
Bulk Tallow Installations
SCALE
0 50 100 150 200 250 300 metres
N

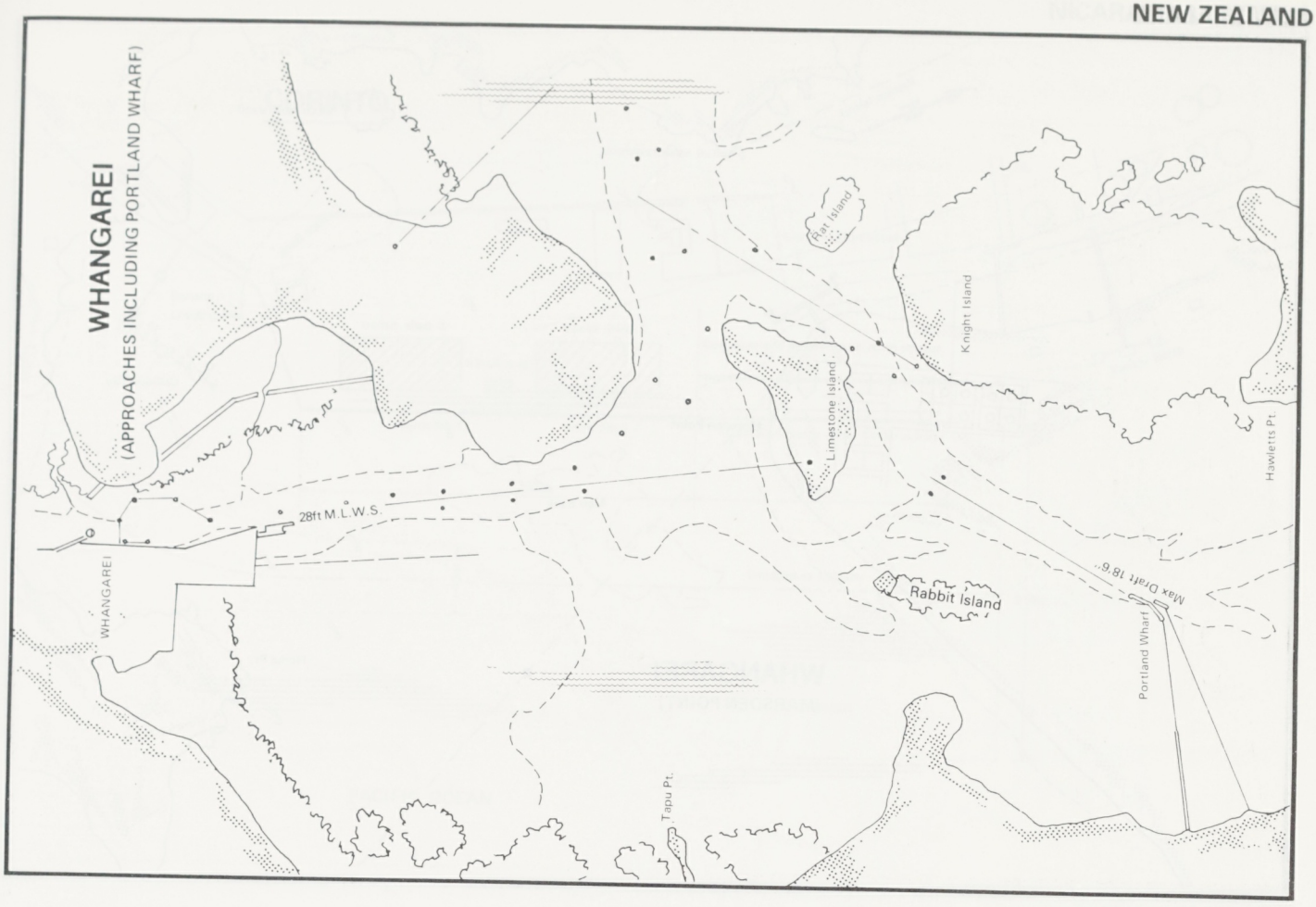


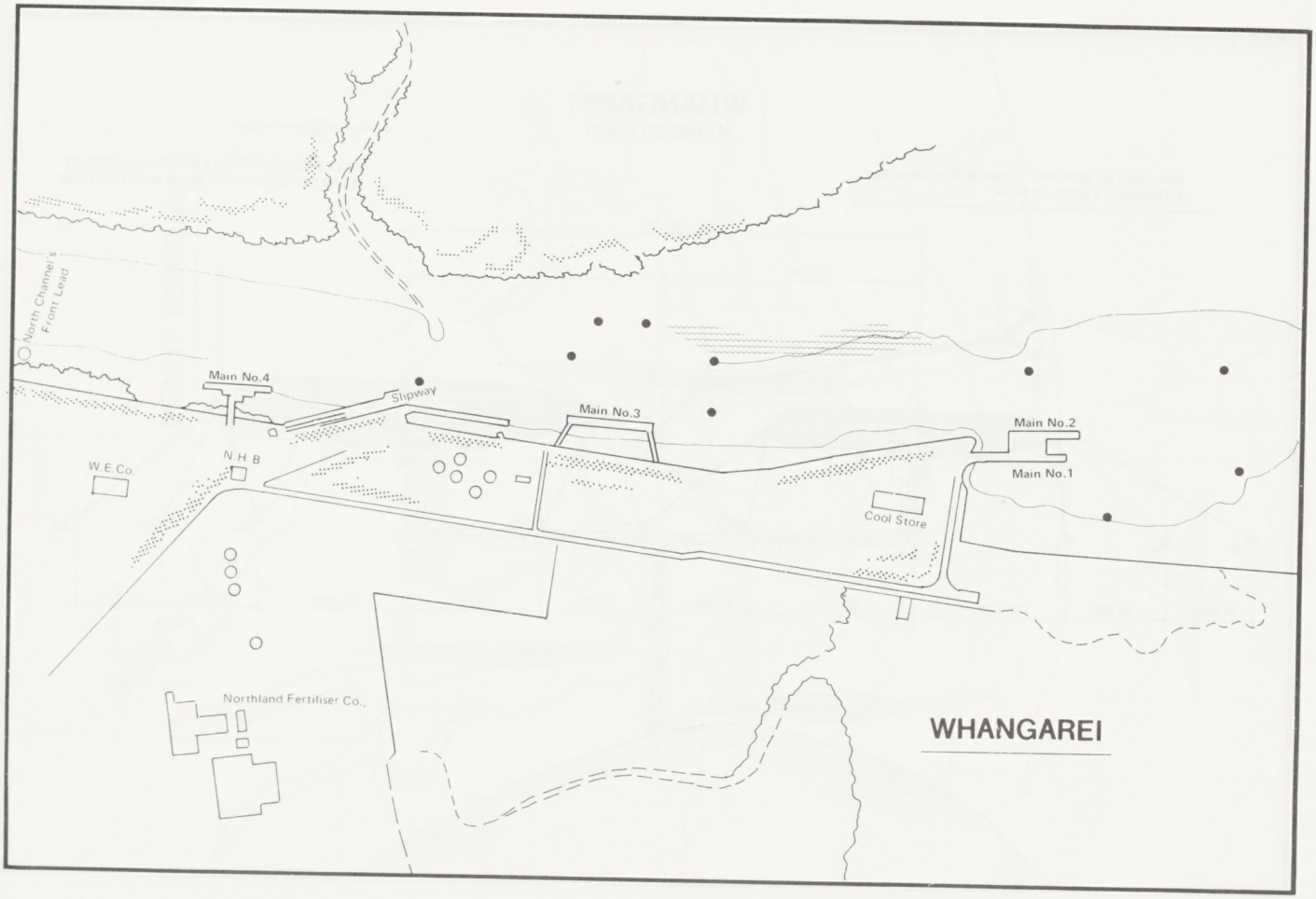
P557

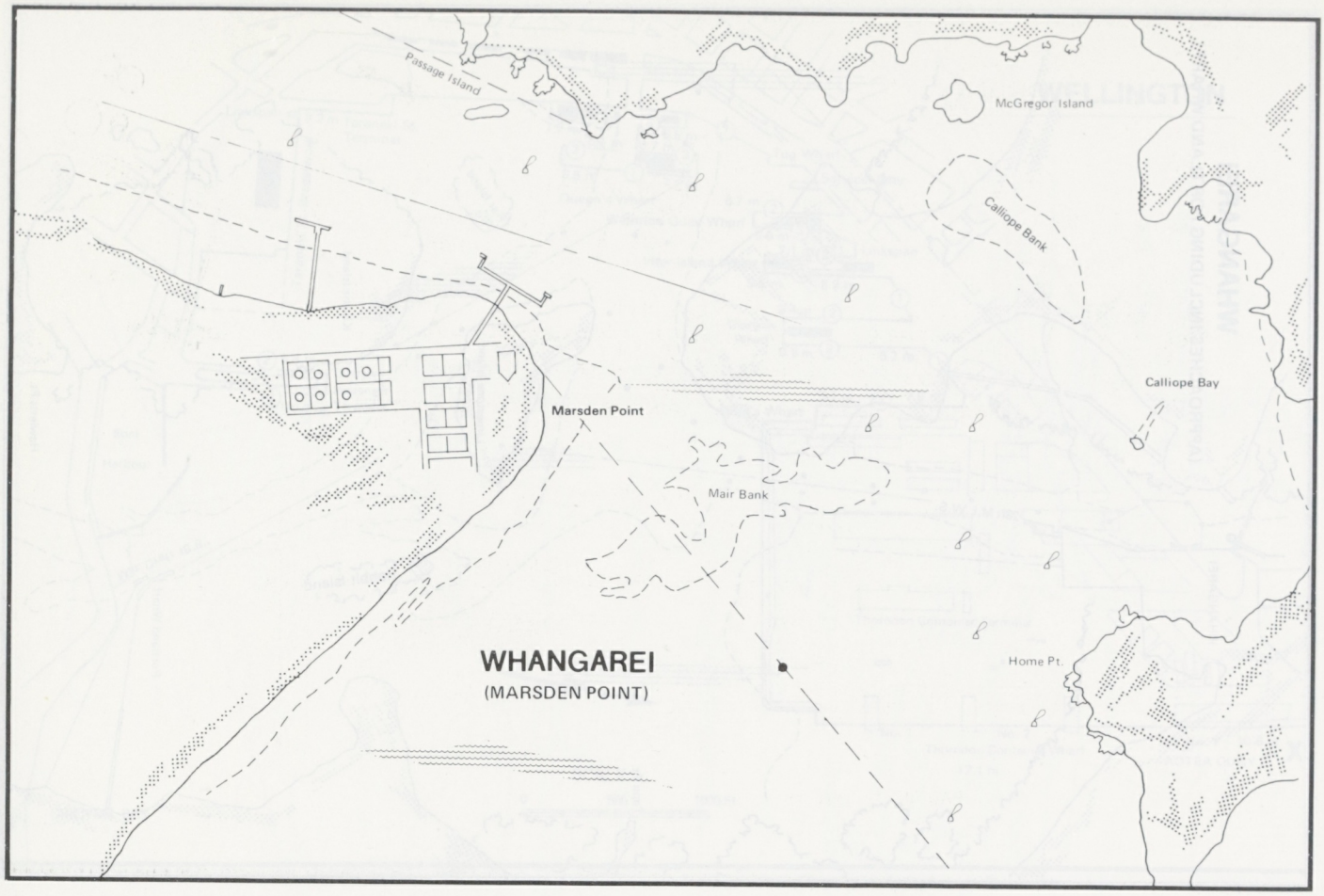
NEW ZEALAND


WELLINGTON
Linkspan
8.2 m Taranaki St. Terminal
Taranaki St. Breastwork
7.7 m
6.1 m
8.5 m
Queen's Wharf
5.5 m
6.7 m
7.1 m
Tug Wharf
Service Jetty
6.7 m
Waterloo Quay Wharf
5.0 m
7.1 m
Linkspan
Inter-Island Wharf
9.1 m.
8.2 m.
9.4 m
Glasgow Wharf
9.5 m
6.2 m.
9.6 m.
Overseas Passenger Terminal
10.2 m.
Boat Harbour
9.1 m
7.9 m.
King's Wharf
Thorndon Container Terminal
No. 1
No. 2
Thorndon Container Wharf
12.1 m
No. 1 10.6 m
AOTEA QUAY
X
SCALE
0 500 1000 Ft
ORIENTAL BAY


WELLINGTON
EVANS BAY
MIRAMAR
Scale as general plan
Miramar Wharf
10.6 m.
Incinerator Jetty
9.8 m. am 10.4 m.
Burnham Wharf
Shelly Bay Road
Seaview Wharf
12.1 m.
Watch Room
Amenities Bldg
Point Howard Oil Berth
11.7 m.
13.2 m.
Gates
Days Bay Road
POINT HOWARD
Motorway
Aotea Quay
X
10.6 m No. 2
10.4 m No. 3
10.3 m No. 4
10.3 m No. 5 Coal
10.4 m
Berth No. 6
10.2 m
No. 1 Berth
Rail-Road Ferry Terminal
No. 2 Berth
Guide Dolphins
Floating Dock
Reclamation Works in Progress


WHANGAREI
(APPROACHES INCLUDING PORTLAND WHARF)
Rat Island
Knight Island
Limestone Island
Hawletts Pt.
28ft M.L.W.S.
WHANGAREI
Rabbit Island
Max Draft 18'6"
Portland Wharf
Tapu Pt.

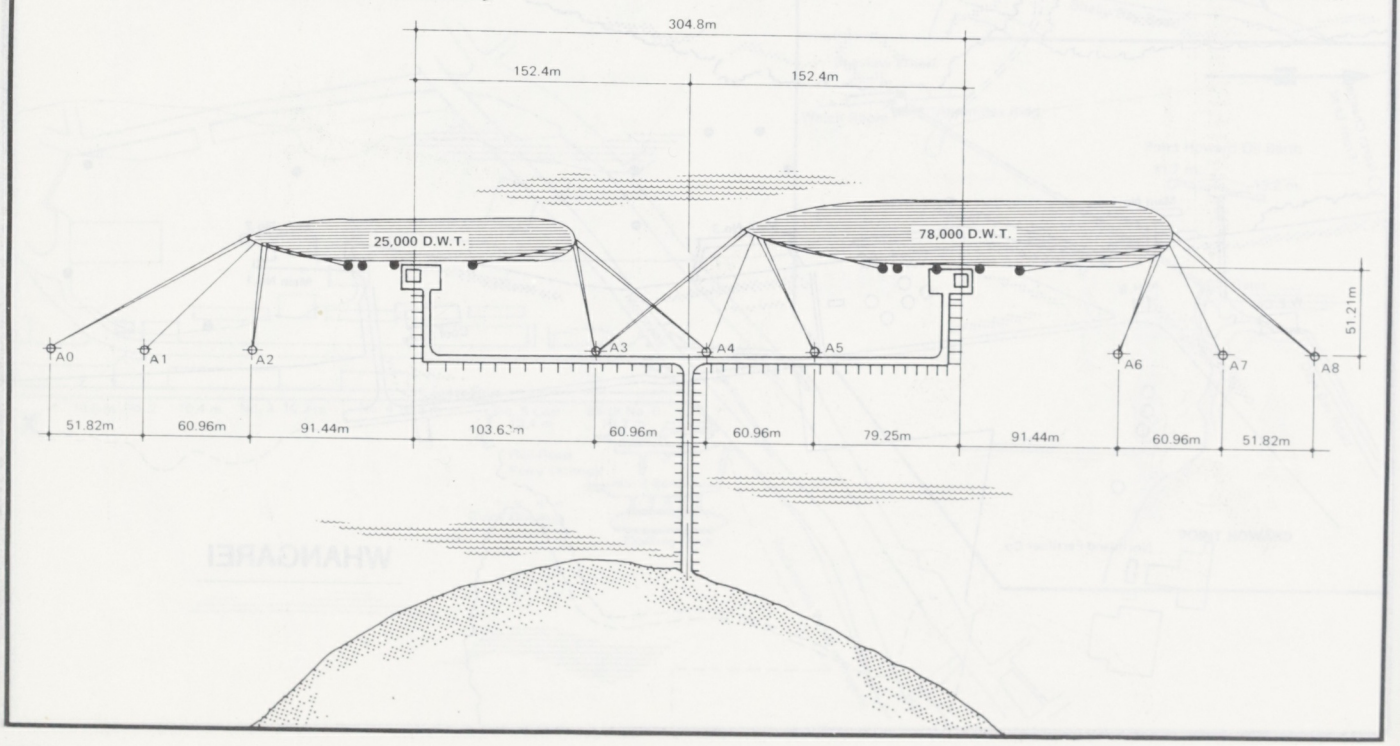

North Channel's Front Lead
Main No.4
Slipway
Main No.3
Main No.2
Main No.1
W.E.Co.
N.H.B
Cool Store
Northland Fertiliser Co.
WHANGAREI

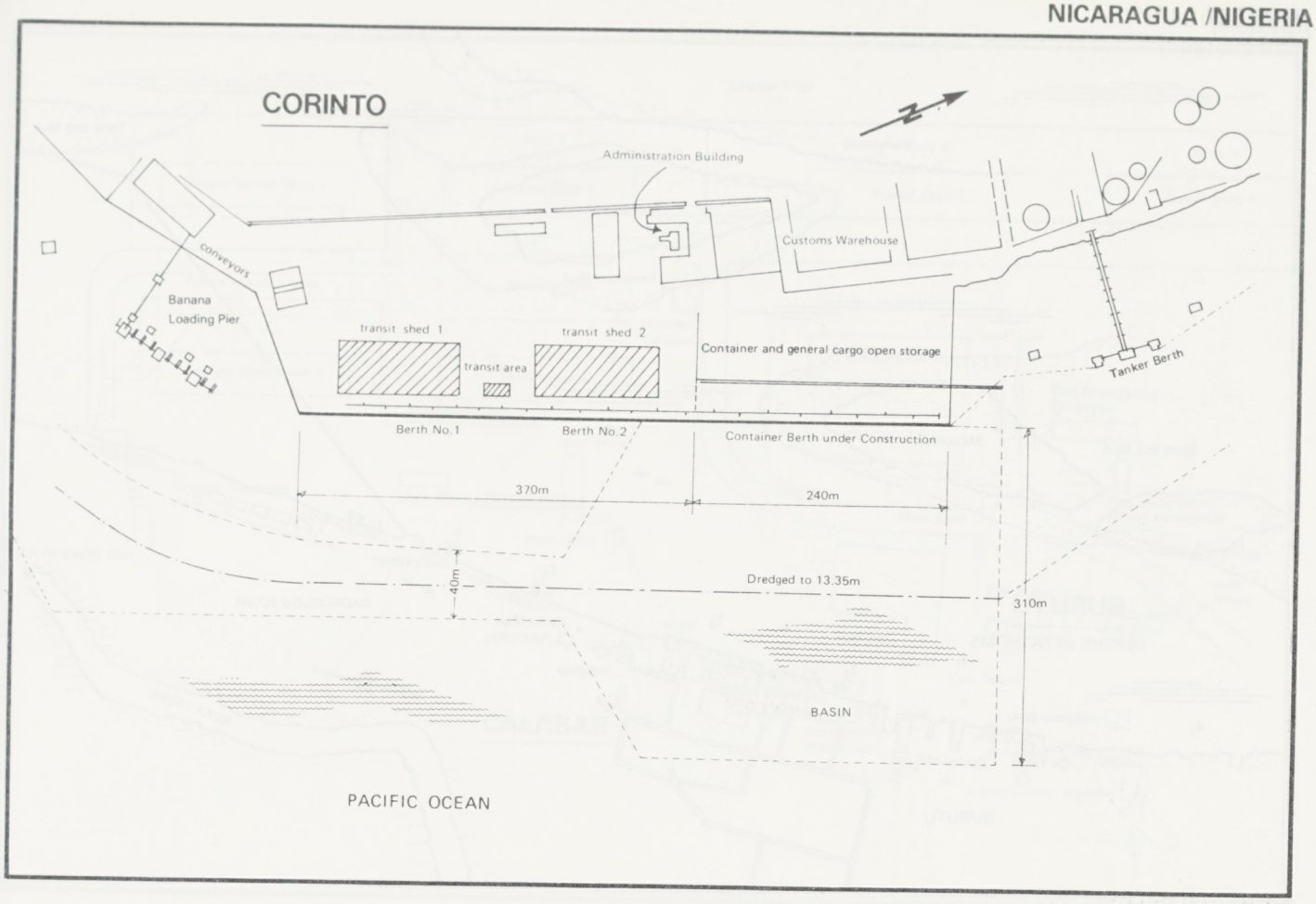


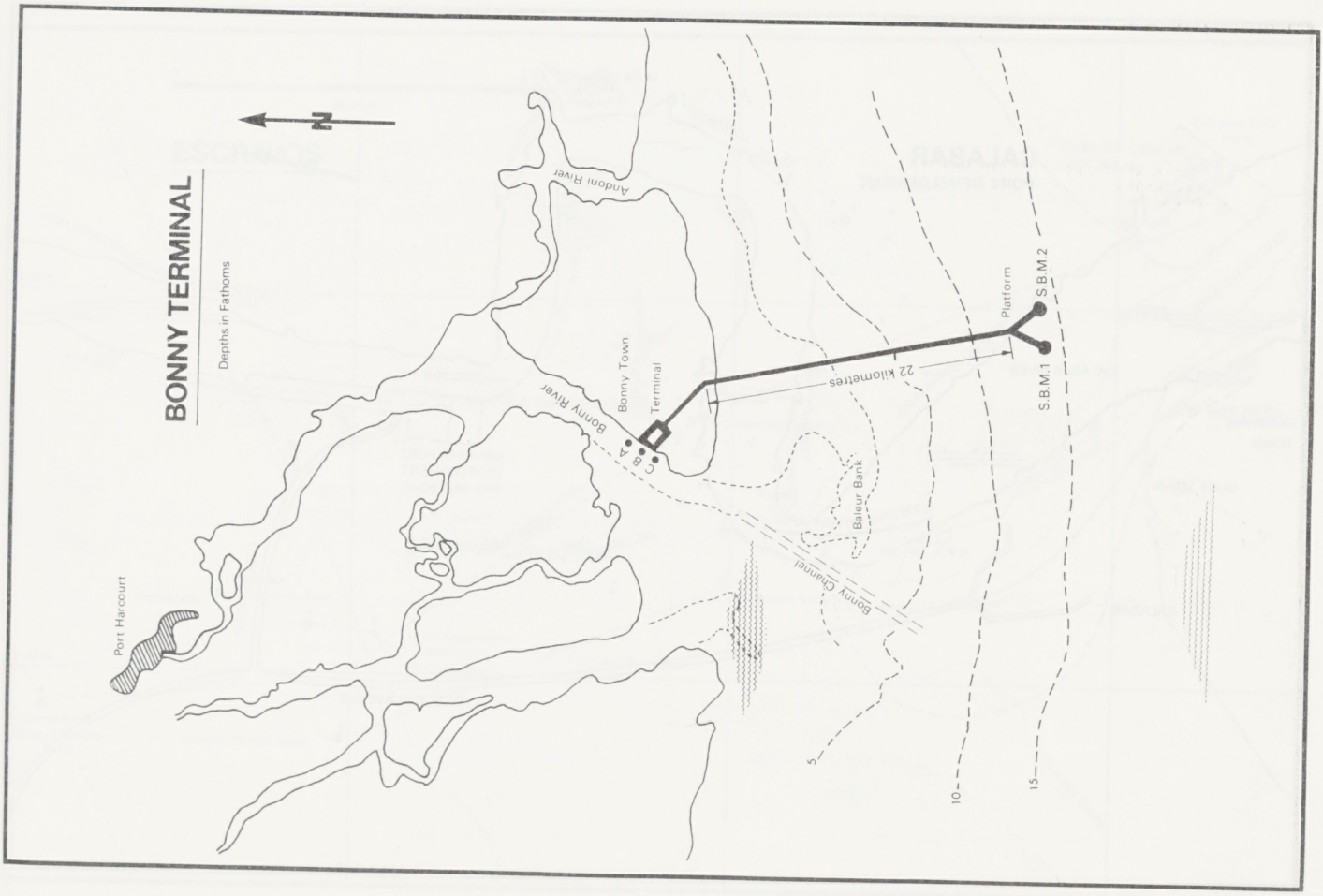
WHANGAREI
MARSDEN POINT

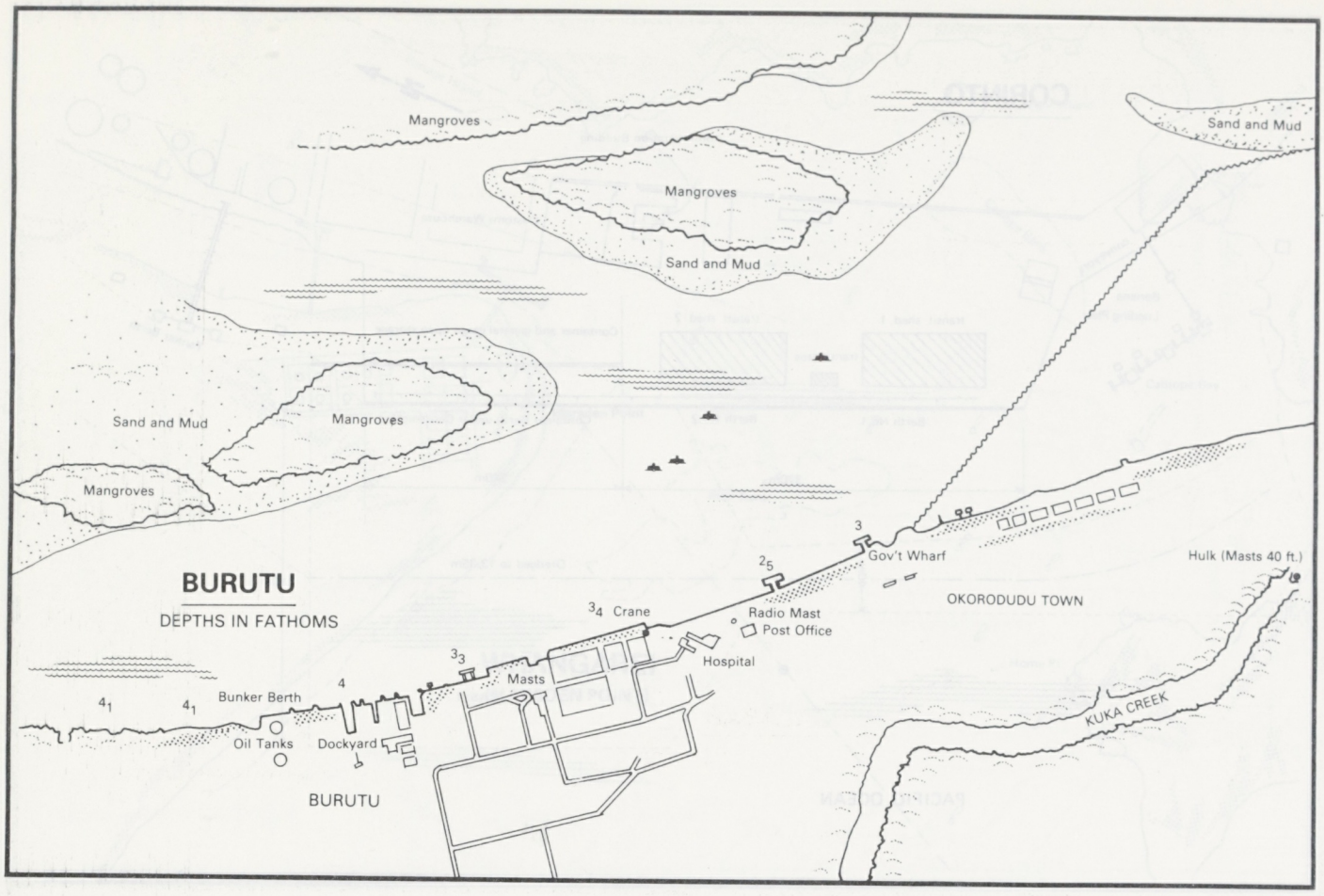
CURRENT AT BERTHS : 3 KNOTS MAXIMUM EBB
AVERAGE 2 KNOTS AT PEAK

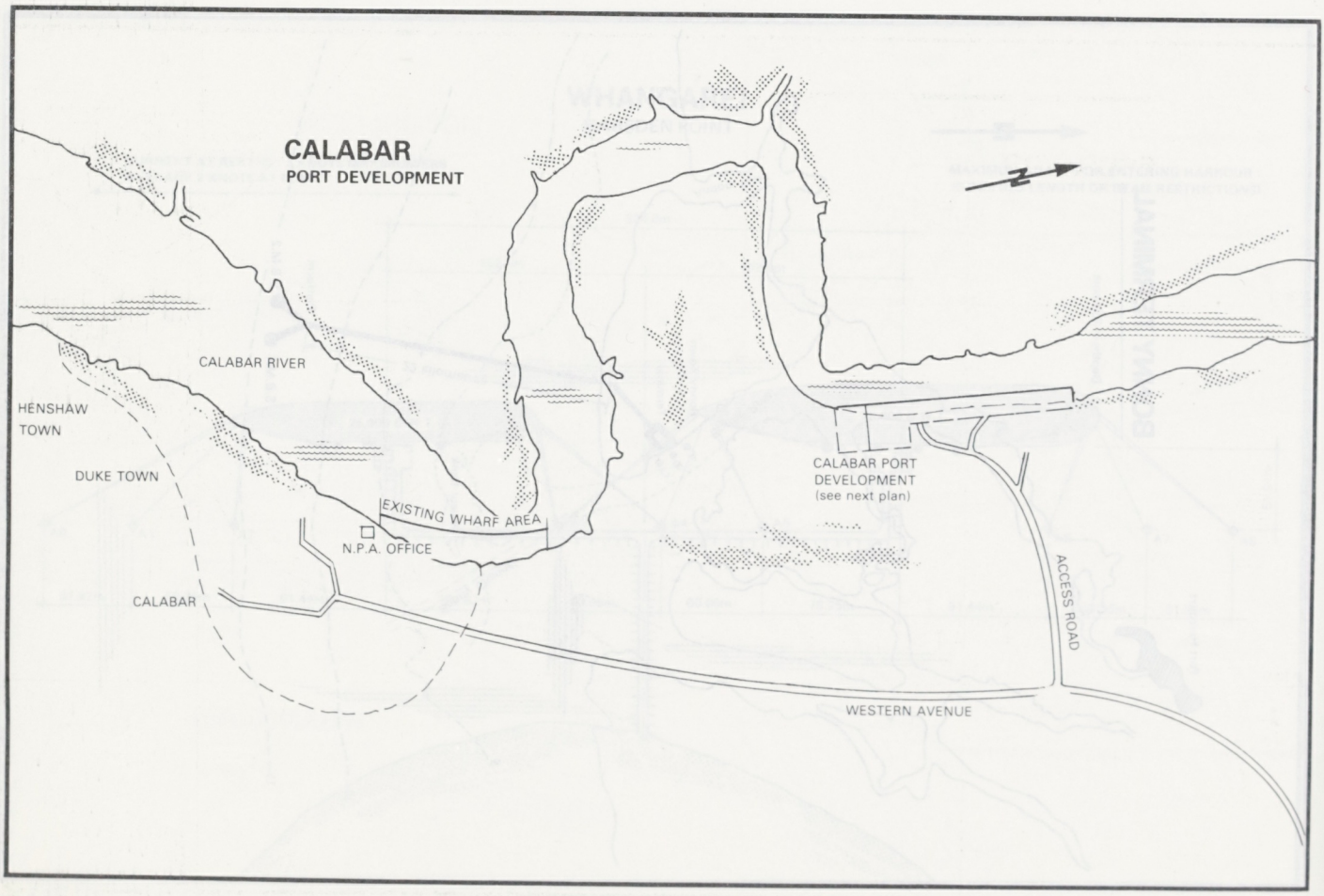
MAXIMUM DRAFT FOR ENTERING HARBOUR :
15.24M (NO LENGTH OR BEAM RESTRICTIONS)

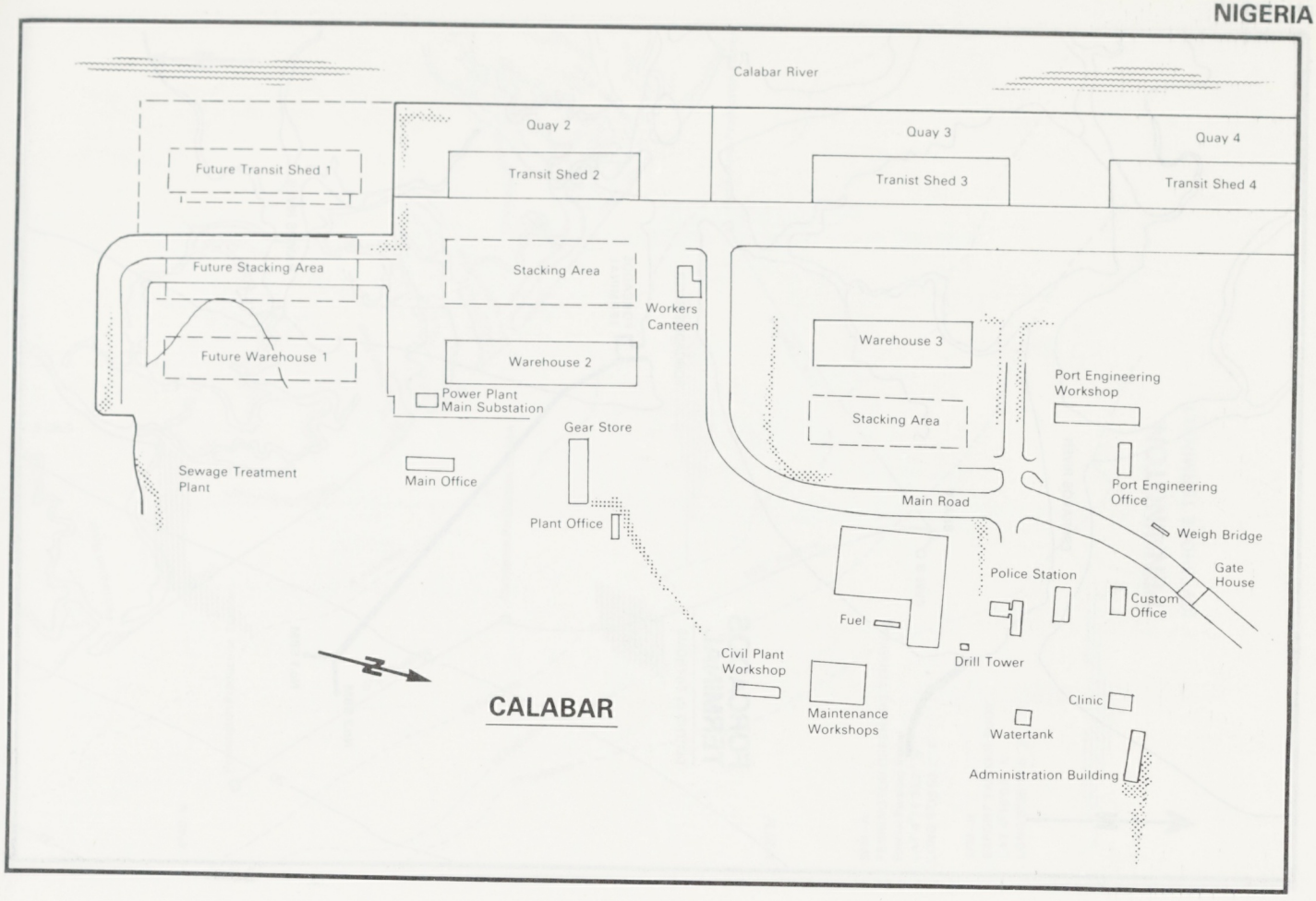


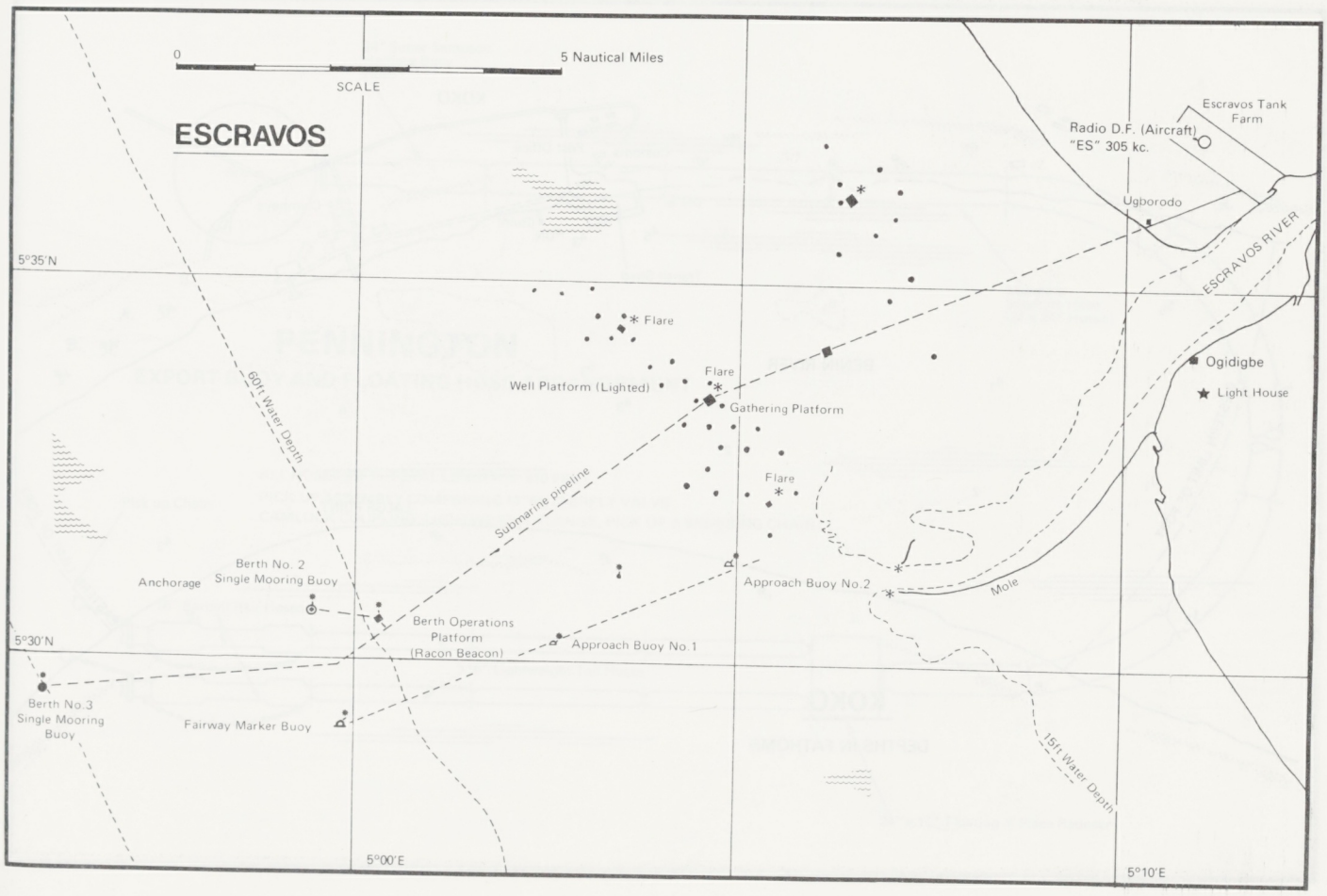

CORINTO
N
Administration Building
Customs Warehouse
conveyors
Banana
Loading Pier
transit shed 1
transit area
transit shed 2
Container and general cargo open storage
Tanker Berth
Berth No.1
Berth No.2
Container Berth under Construction
370m
240m
40m
Dredged to 13.35m
310m
BASIN
PACIFIC OCEAN

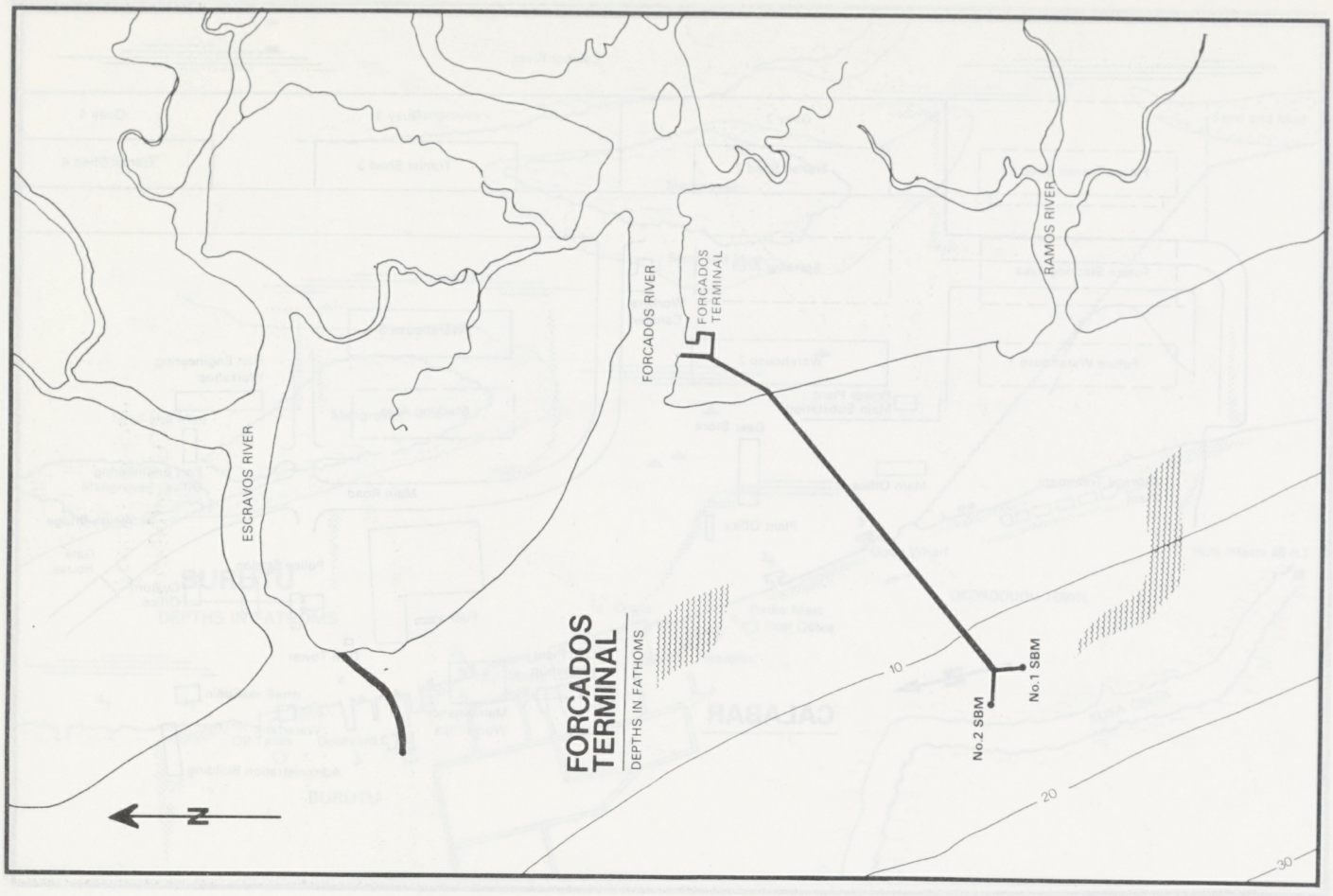

BONNY TERMINAL
Depths in Fathoms
N
Andoni River
Bonny River
Bonny Town
Terminal
A
B
C
Platform
S.B.M.2
S.B.M.1
22 kilometres
Baleur Bank
Bonny Channel
Port Harcourt
5
10
15

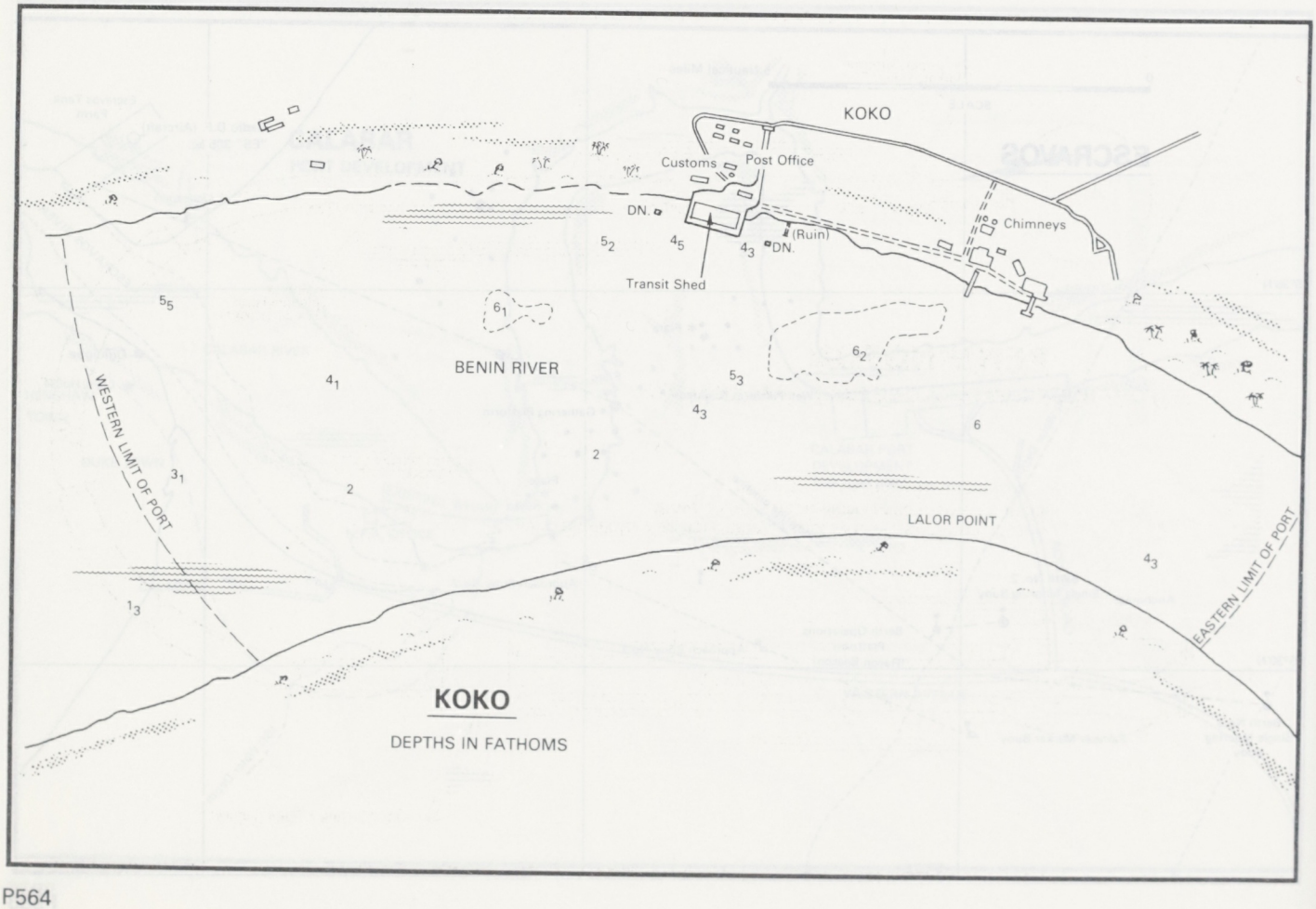

Mangroves
Mangroves
Sand and Mud
Sand and Mud
Sand and Mud
Mangroves
Mangroves
BURUTU
DEPTHS IN FATHOMS
3
Gov't Wharf
Hulk (Masts 40 ft.)
2 5
OKORODUDU TOWN
3 4 Crane
Radio Mast
Post Office
Hospital
3 3
Masts
4
Bunker Berth
4 1
4 1
Oil Tanks
Dockyard
KUKA CREEK
BURUTU

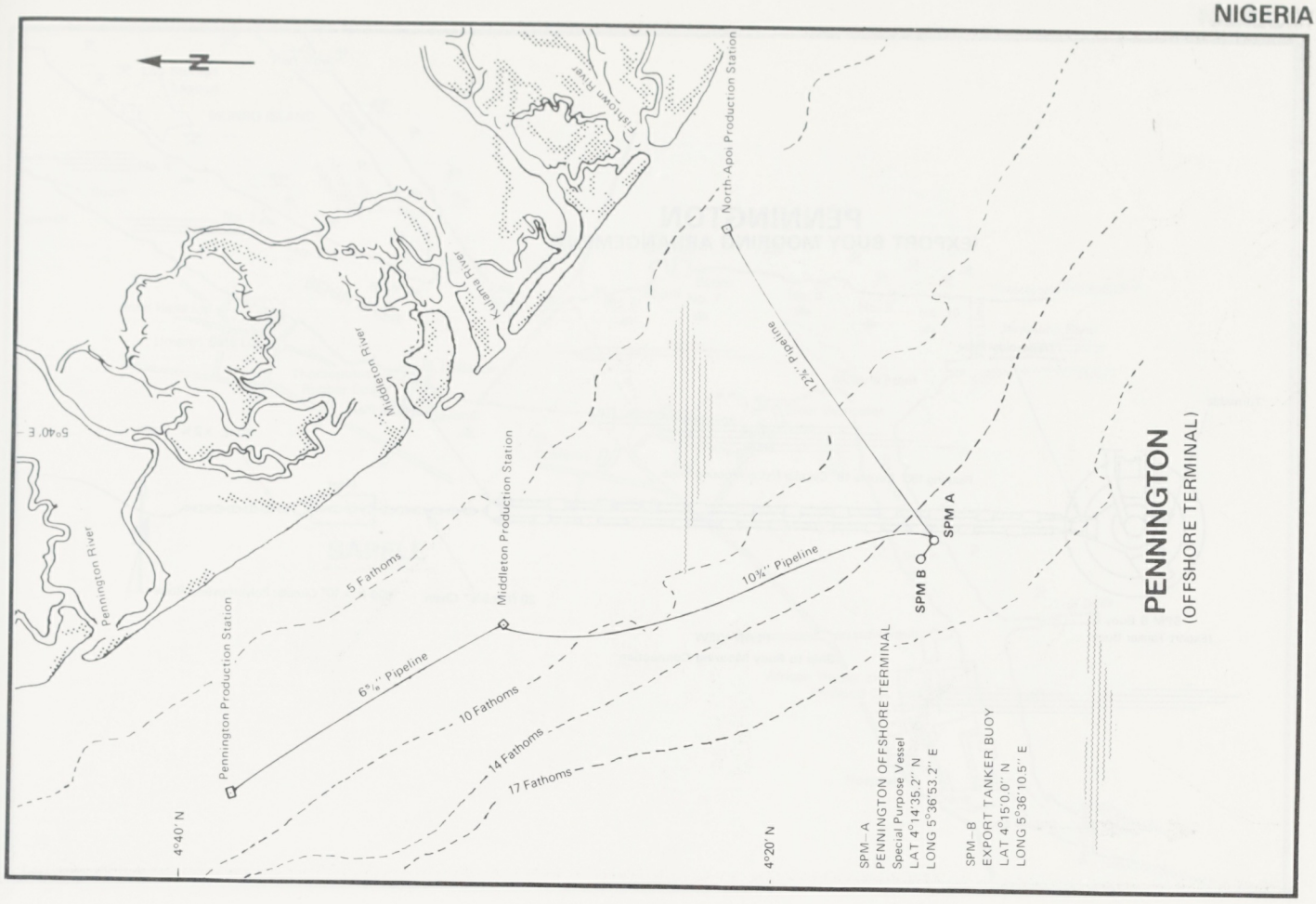

CALABAR
PORT DEVELOPMENT
CALABAR RIVER
HENSHAW TOWN
DUKE TOWN
EXISTING WHARF AREA
N.P.A. OFFICE
CALABAR
CALABAR PORT DEVELOPMENT
(see next plan)
ACCESS ROAD
WESTERN AVENUE

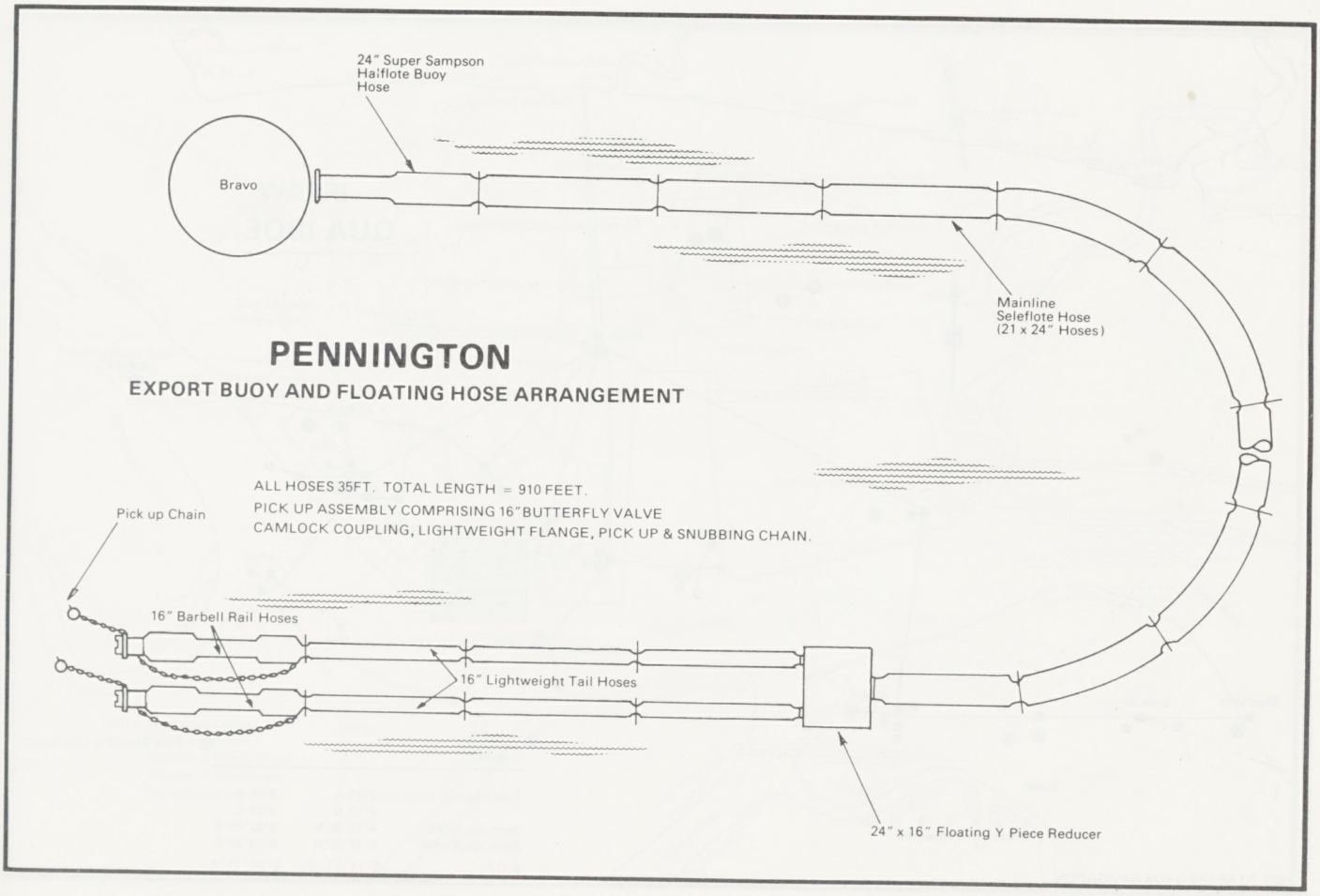

Calabar River
Quay 2
Quay 3
Quay 4
Future Transit Shed 1
Transit Shed 2
Tranist Shed 3
Transit Shed 4
Future Stacking Area
Stacking Area
Workers Canteen
Future Warehouse 1
Warehouse 2
Warehouse 3
Power Plant
Main Substation
Port Engineering Workshop
Stacking Area
Gear Store
Sewage Treatment Plant
Main Office
Plant Office
Main Road
Port Engineering Office
Weigh Bridge
Gate House
Police Station
Custom Office
Fuel
Drill Tower
Civil Plant Workshop
Maintenance Workshops
Clinic
Watertank
Administration Building
CALABAR


0
5 Nautical Miles
SCALE
ESCRAVOS
Escravos Tank Farm
Radio D.F. (Aircraft) "ES" 305 kc.
Ugborodo
ESCRAVOS RIVER
5°35'N
Flare
Well Platform (Lighted)
Flare
Gathering Platform
60ft Water Depth
Submarine pipeline
Flare
Ogidigbe
Light House
Berth No. 2 Single Mooring Buoy
Anchorage
Approach Buoy No.2
Mole
Berth Operations Platform (Racon Beacon)
5°30'N
Approach Buoy No.1
Berth No.3 Single Mooring Buoy
Fairway Marker Buoy
15ft Water Depth
5°00'E
5°10'E

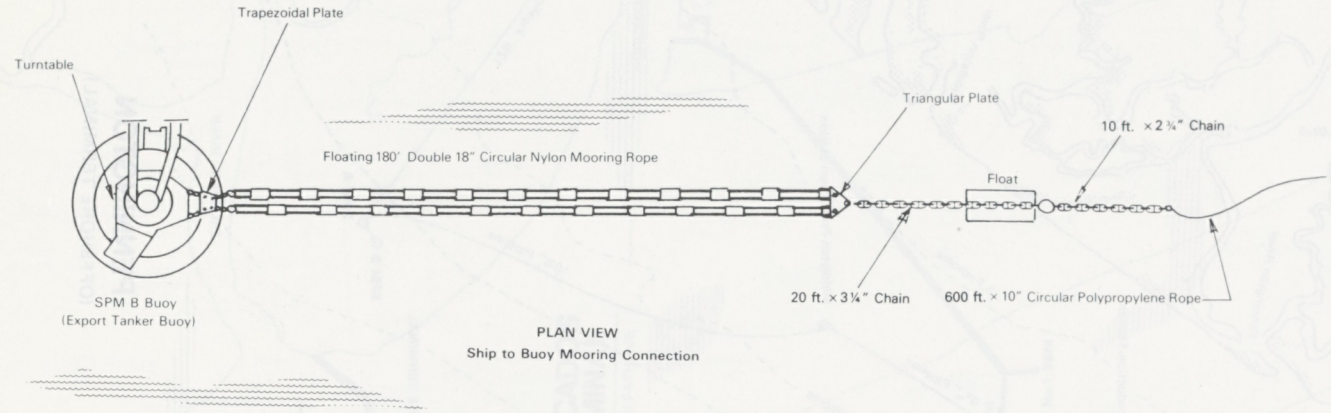

ESCRAVOS RIVER
FORCADOS RIVER
FORCADOS TERMINAL
RAMOS RIVER
FORCADOS TERMINAL
DEPTHS IN FATHOMS
No.2 SBM
No.1 SBM
10
20
30
N


KOKO
Customs
Post Office
DN.
(Ruin)
DN.
Chimneys
Transit Shed
BENIN RIVER
WESTERN LIMIT OF PORT
LALOR POINT
EASTERN LIMIT OF PORT
KOKO
DEPTHS IN FATHOMS


N
Fishtown River
North Apoi Production Station
Kulama River
Middleton River
5°40' E
Pennington River
Middleton Production Station
12¾" Pipeline
SPM A
10¾" Pipeline
SPM B
5 Fathoms
6⅝" Pipeline
Pennington Production Station
10 Fathoms
14 Fathoms
17 Fathoms
4°40' N
4°20' N
SPM – A
PENNINGTON OFFSHORE TERMINAL
Special Purpose Vessel
LAT 4°14'35.2" N
LONG 5°36'53.2" E
SPM – B
EXPORT TANKER BUOY
LAT 4°15'0.0" N
LONG 5°36'10.5" E
PENNINGTON
(OFFSHORE TERMINAL)

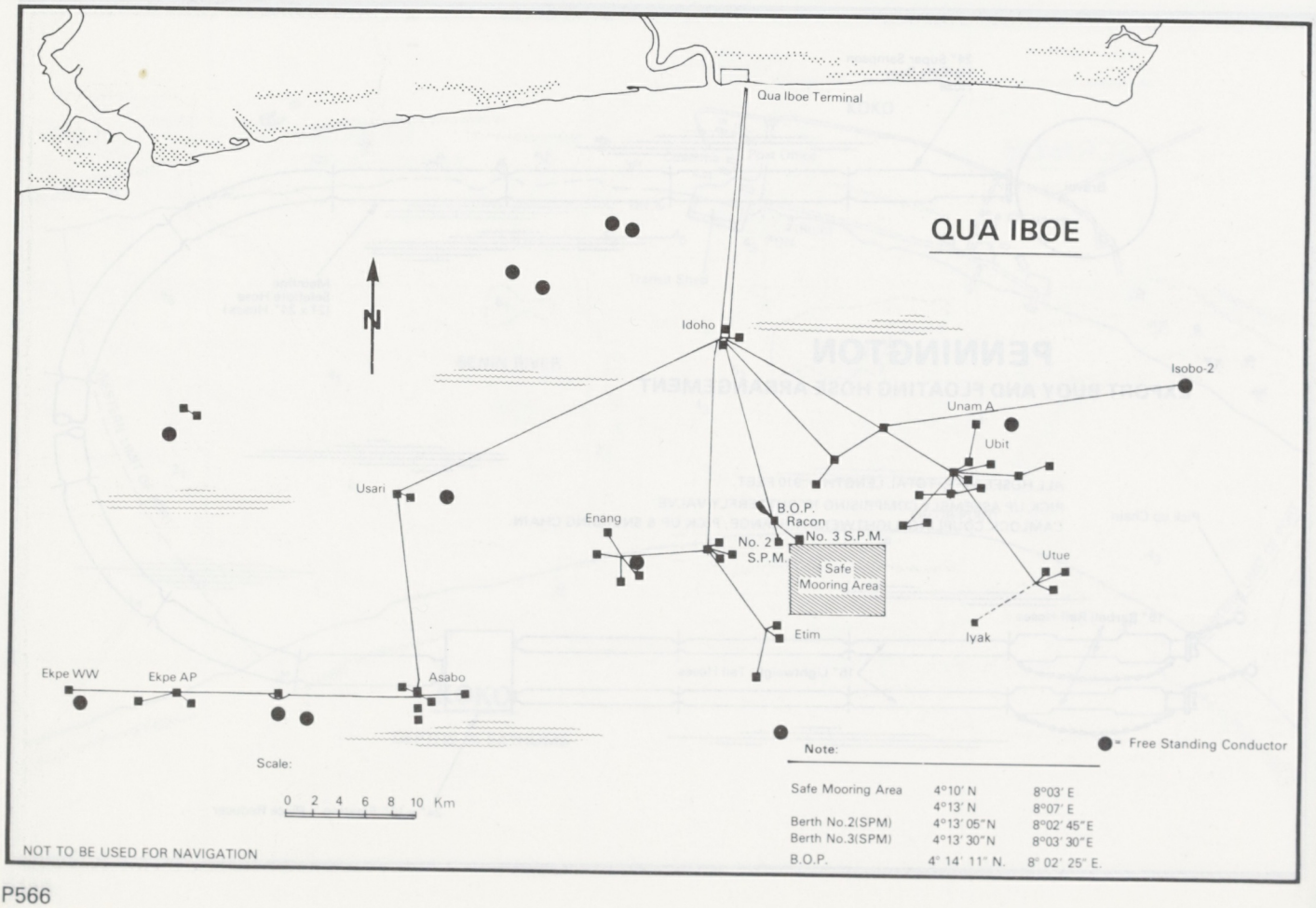

24" Super Sampson
Halflote Buoy
Hose
Bravo
Mainline
Seleflote Hose
(21 x 24" Hoses)
PENNINGTON
EXPORT BUOY AND FLOATING HOSE ARRANGEMENT
ALL HOSES 35FT. TOTAL LENGTH = 910 FEET.
PICK UP ASSEMBLY COMPRISING 16" BUTTERFLY VALVE
CAMLOCK COUPLING, LIGHTWEIGHT FLANGE, PICK UP & SNUBBING CHAIN.
Pick up Chain
16" Barbell Rail Hoses
16" Lightweight Tail Hoses
24" x 16" Floating Y Piece Reducer

PENNINGTON
(EXPORT BUOY MOORING ARRANGEMENT)



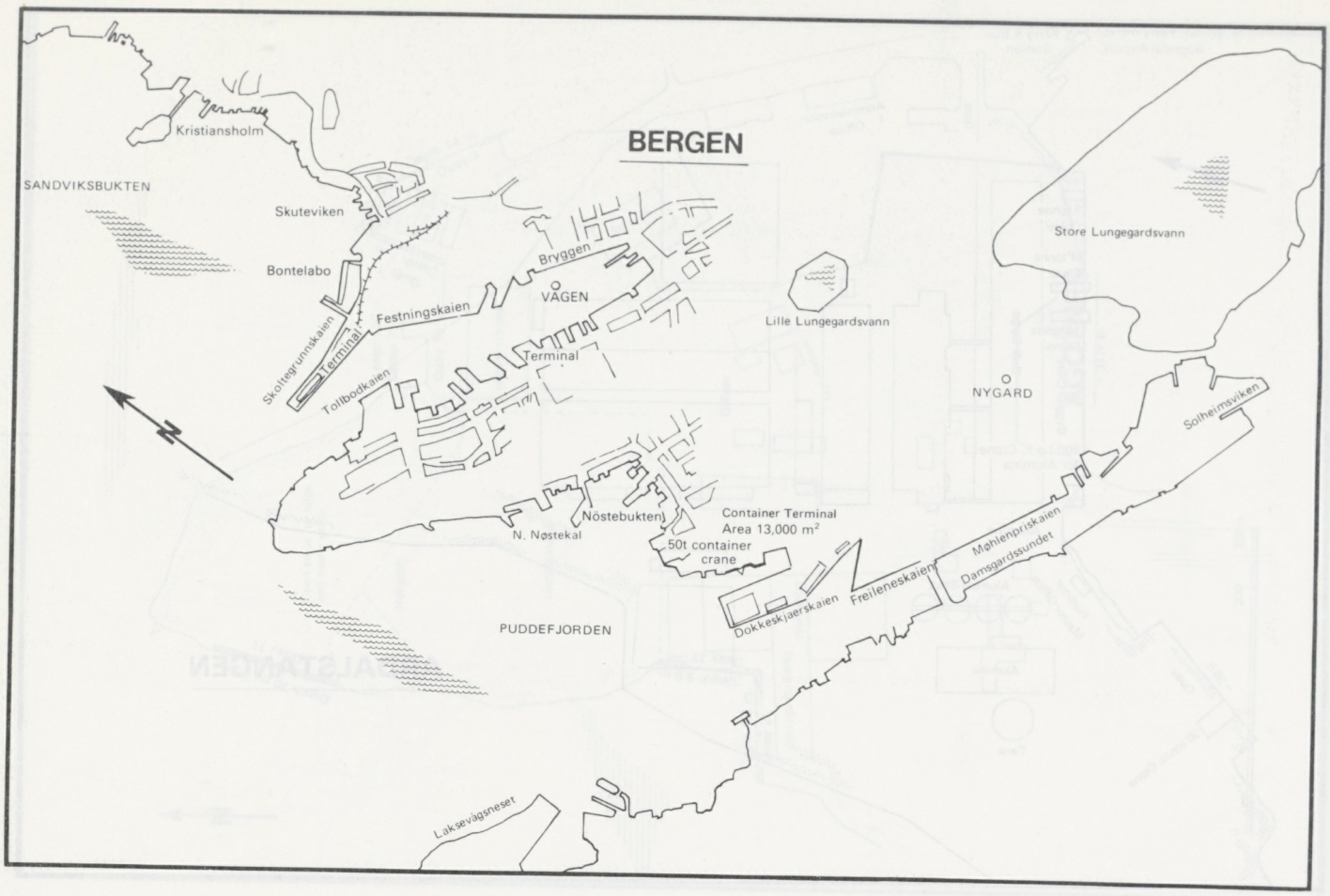
PLAN VIEW
Ship to Buoy Mooring Connection

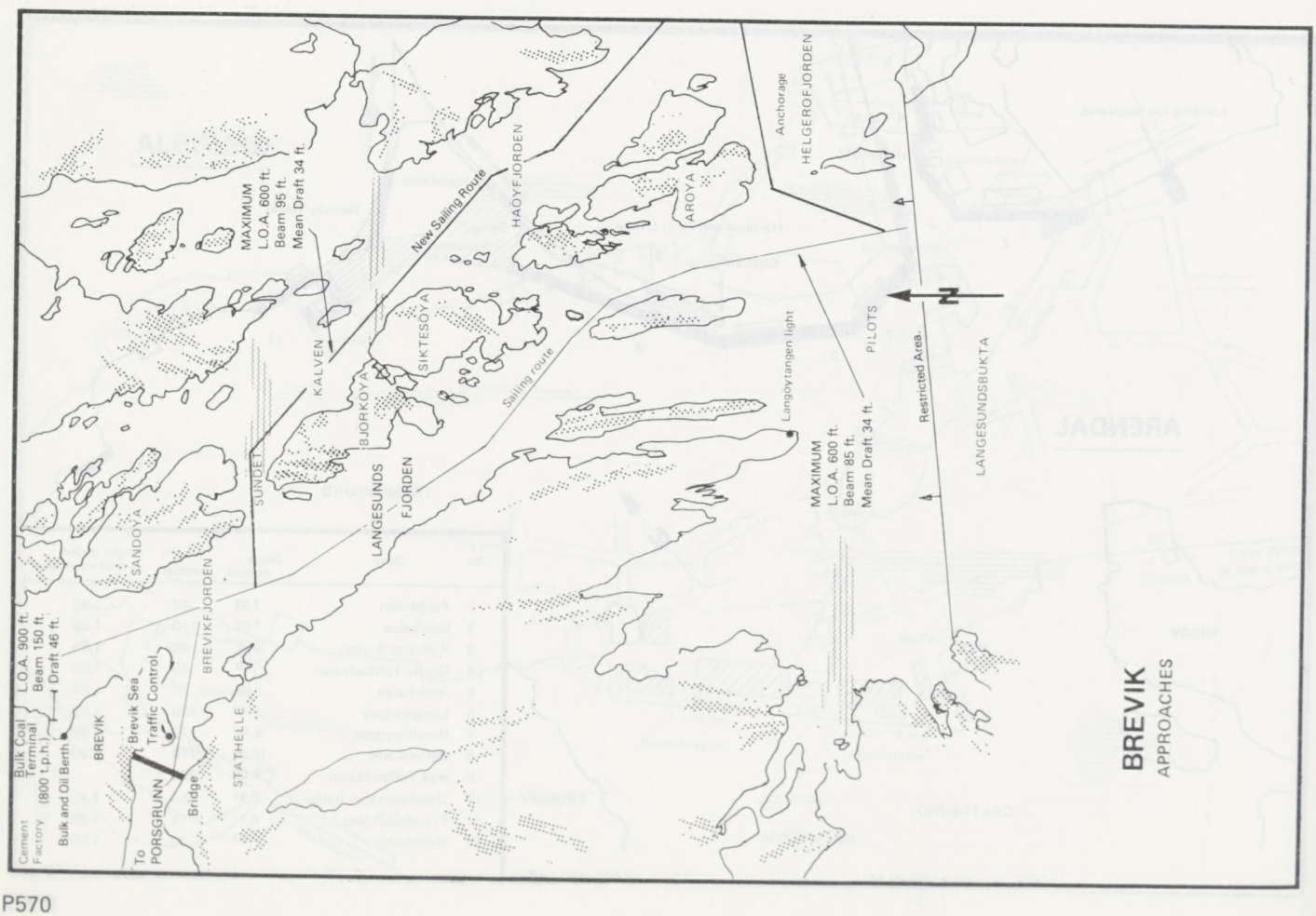
QUA IBOE

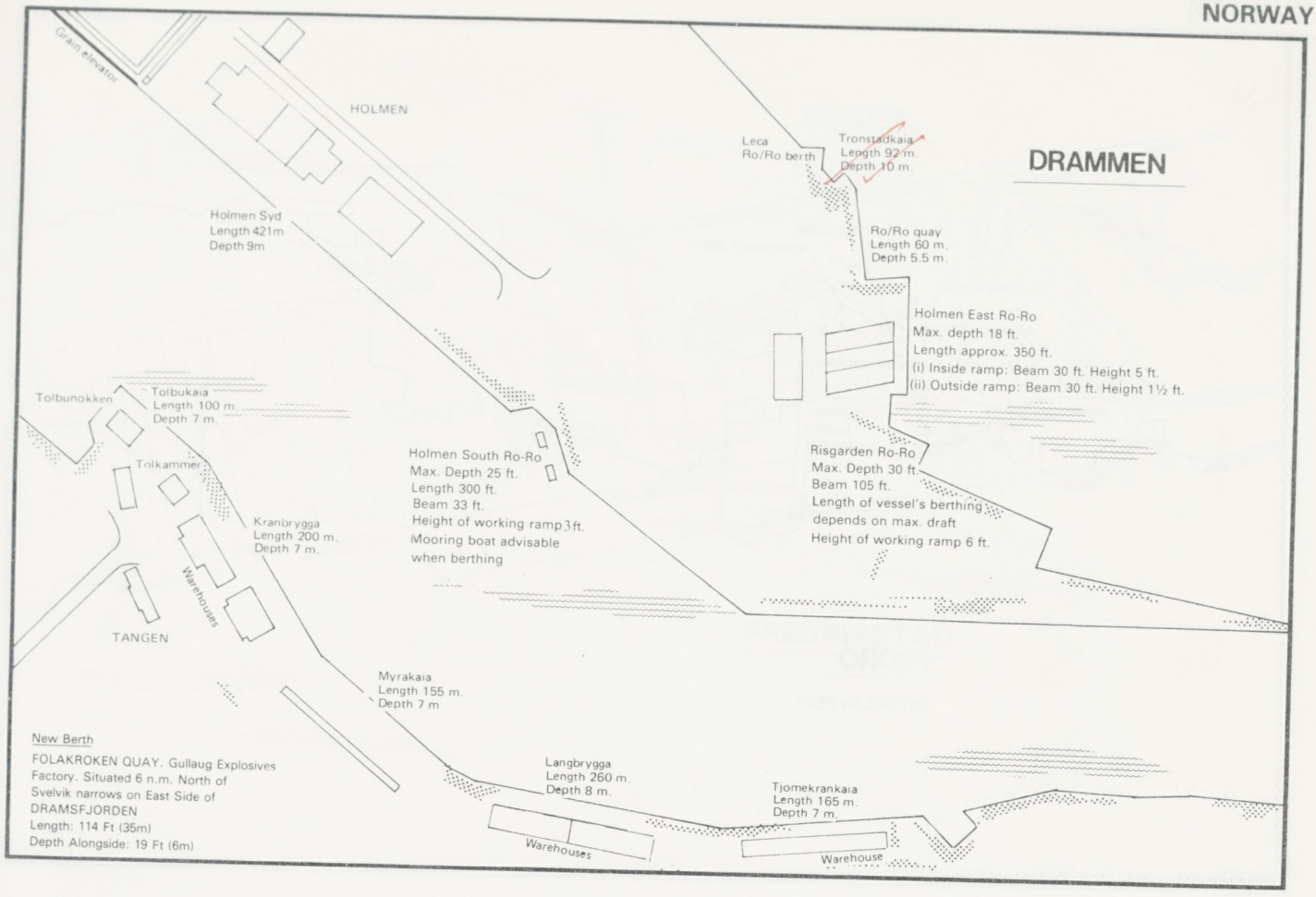


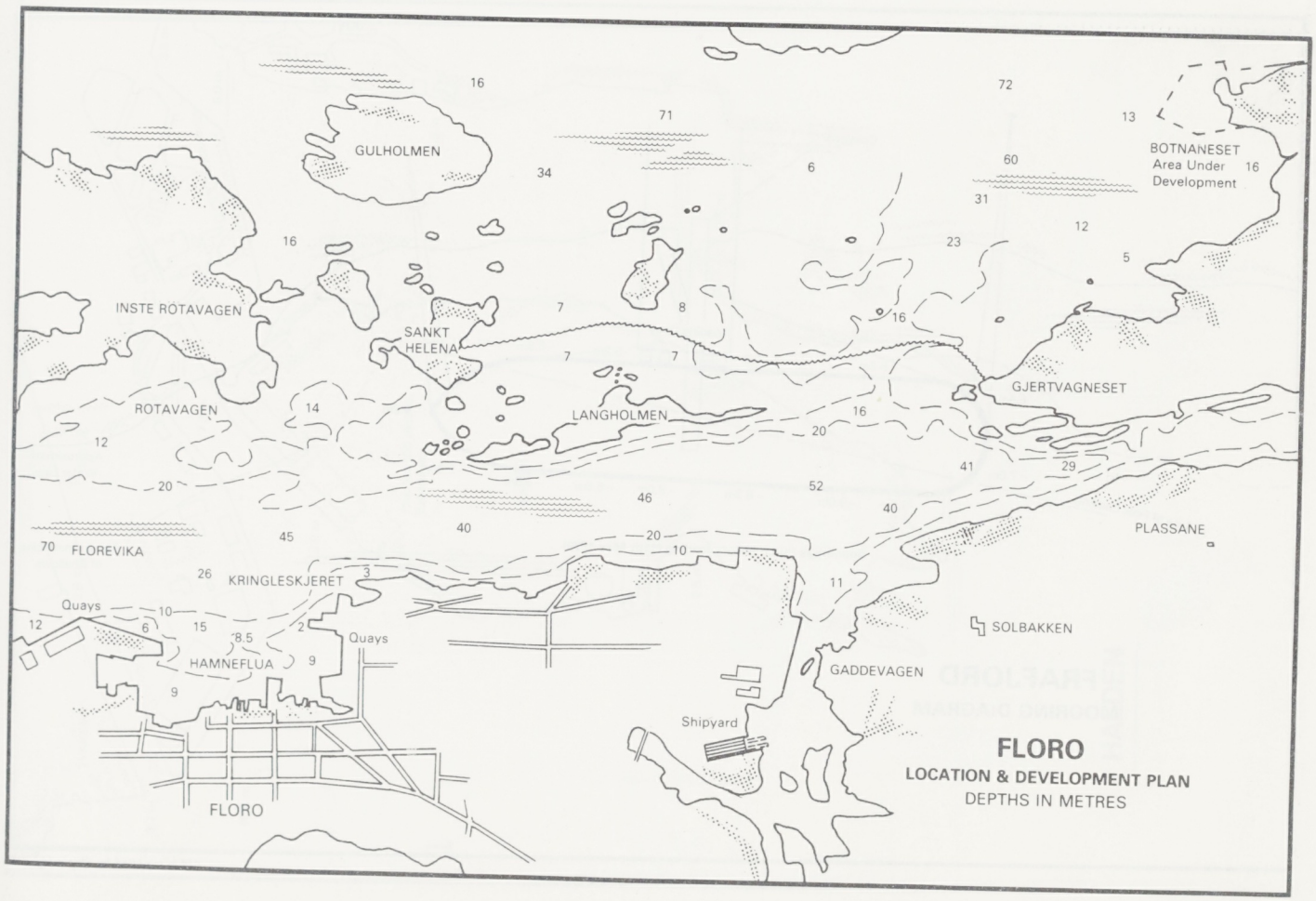
Safe Mooring Area	4°10′ N	8°03′ E
	4°13′ N	8°07′ E
Berth No.2(SPM)	4°13′ 05″N	8°02′ 45″E
Berth No.3(SPM)	4°13′ 30″N	8°03′ 30″E
B.O.P.	4° 14′ 11″ N.	8° 02′ 25″ E.

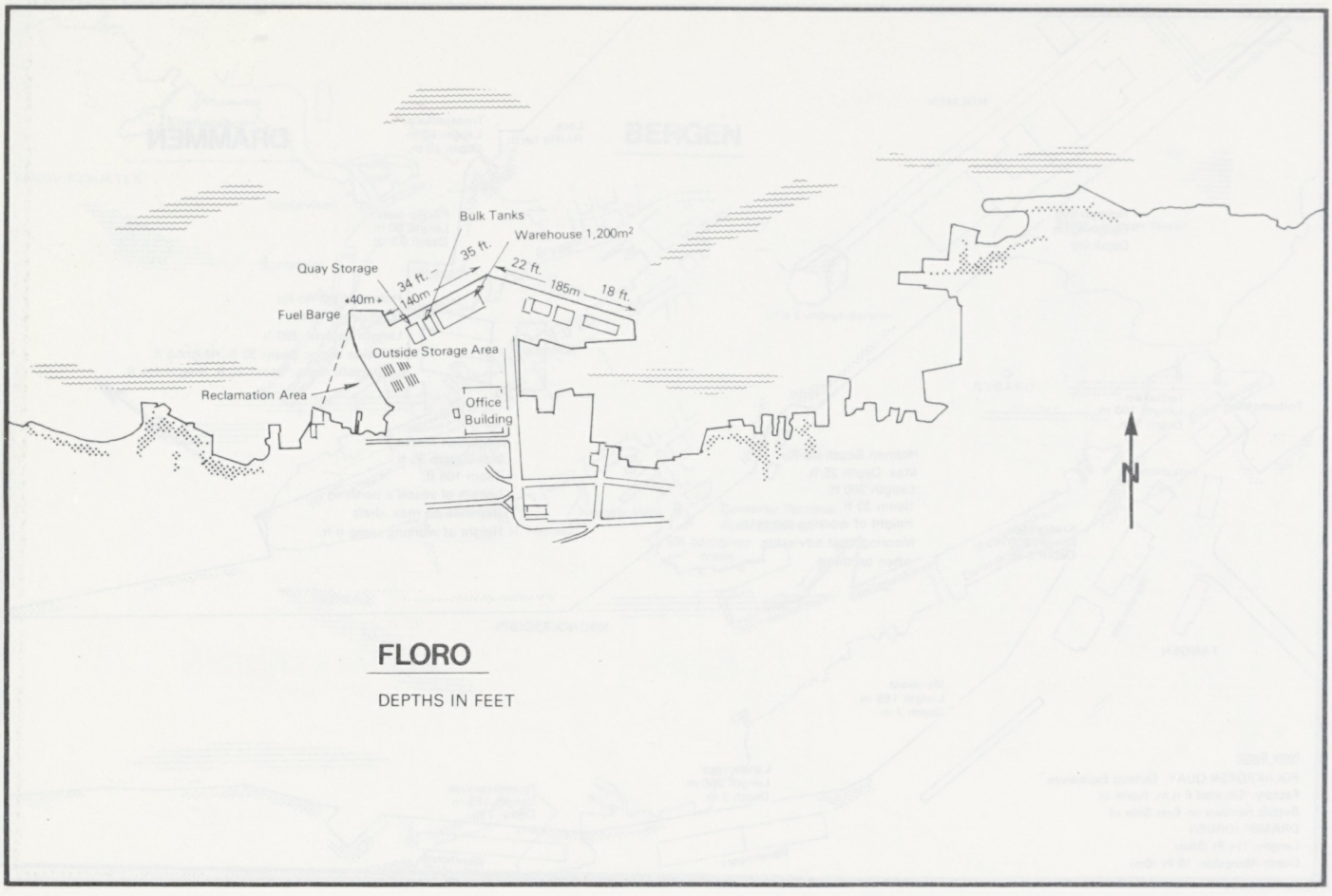
NOT TO BE USED FOR NAVIGATION


BERGEN
Kristiansholm
SANDVIKSBUKTEN
Skuteviken
Bontelabo
Bryggen
VÅGEN
Festningskaien
Skolegrunnskaien
Terminal
Tollbodkaien
Terminal
Lille Lungegardsvann
Store Lungegardsvann
NYGARD
Solheimsviken
Nøstebukten
N. Nøstekai
Container Terminal
Area 13,000 m²
50t container crane
Dokkeskjærskaien
Frieleneskaien
Møhlenpriskaien
Damsgardssundet
PUDDEFJORDEN
Laksevågsneset


BREVIK
APPROACHES
Bulk Coal Terminal (800 t.p.h.)
Bulk and Oil Berth
L.O.A. 900 ft.
Beam 150 ft.
Draft 46 ft.
Cement Factory
BREVIK
Brevik Sea Traffic Control
Bridge
To PORSGRUNN
STATHELLE
BREVIKFJORDEN
SANDØYA
SUNDET
LANGESUNDS FJORDEN
KALVEN
BJØRKØYA
SIKTESØYA
New Sailing Route
HAØYFJORDEN
MAXIMUM
L.O.A. 600 ft.
Beam 95 ft.
Mean Draft 34 ft.
ARØYA
Anchorage
HELGERØFJORDEN
Langøytangen light
Sailing route
MAXIMUM
L.O.A. 600 ft.
Beam 85 ft.
Mean Draft 34 ft.
PILOTS
Restricted Area.
LANGESUNDSBUKTA
N

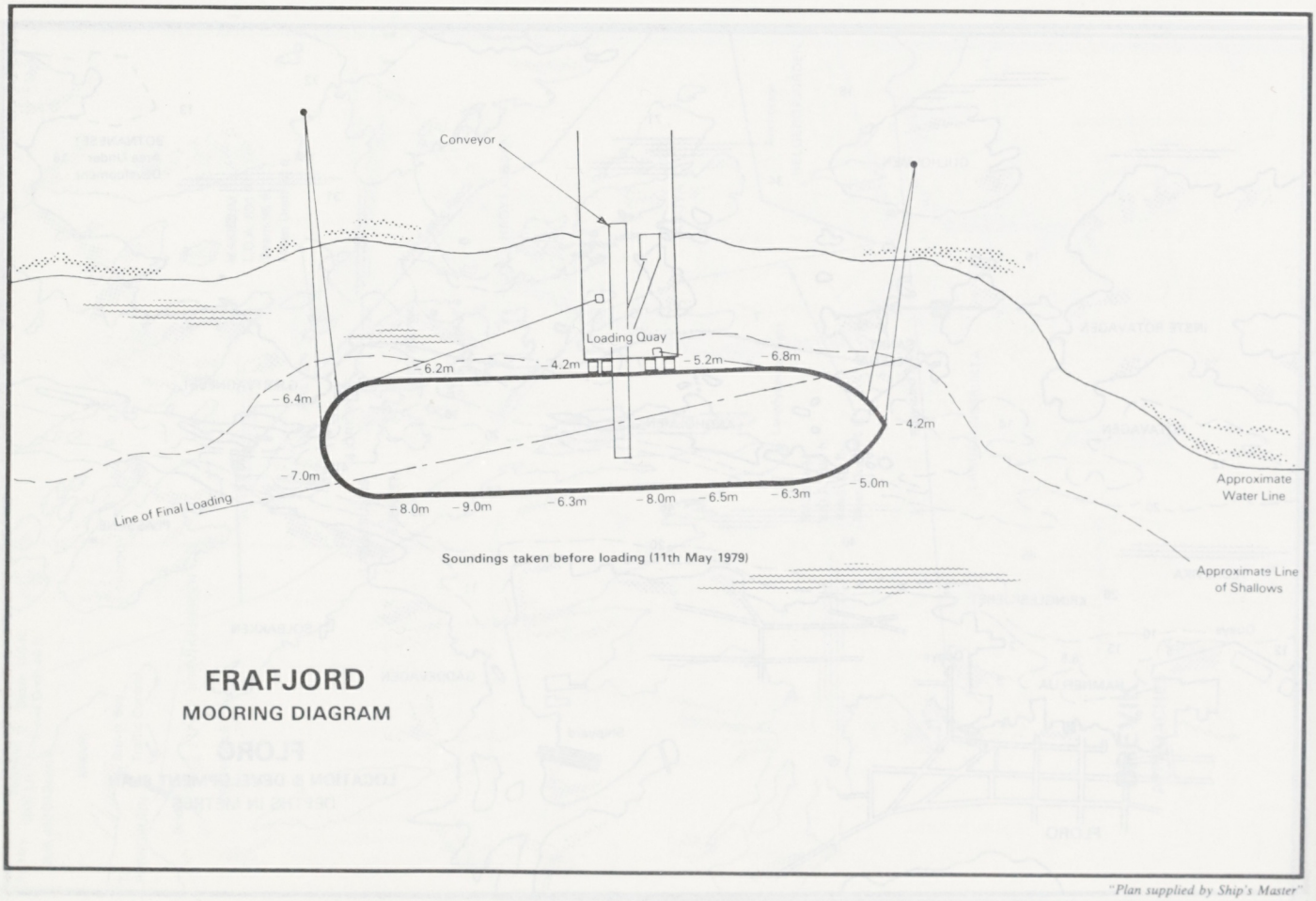

Grain elevator
HOLMEN
Holmen Syd
Length 421m
Depth 9m
Leca
Ro/Ro berth
Tronstadkaia
Length 92 m.
Depth 10 m.
DRAMMEN
Ro/Ro quay
Length 60 m.
Depth 5.5 m.
Holmen East Ro-Ro
Max. depth 18 ft.
Length approx. 350 ft.
(i) Inside ramp: Beam 30 ft. Height 5 ft.
(ii) Outside ramp: Beam 30 ft. Height 1½ ft.
Tolbunokken
Tolbukaia
Length 100 m.
Depth 7 m.
Tolkammer
Kranbrygga
Length 200 m.
Depth 7 m.
Warehouses
TANGEN
Holmen South Ro-Ro
Max. Depth 25 ft.
Length 300 ft.
Beam 33 ft.
Height of working ramp 3 ft.
Mooring boat advisable
when berthing
Risgarden Ro-Ro
Max. Depth 30 ft.
Beam 105 ft.
Length of vessel's berthing
depends on max. draft
Height of working ramp 6 ft.
Myrakaia
Length 155 m.
Depth 7 m
New Berth
FOLAKROKEN QUAY. Gullaug Explosives
Factory. Situated 6 n.m. North of
Svelvik narrows on East Side of
DRAMSFJORDEN
Length: 114 Ft (35m)
Depth Alongside: 19 Ft (6m)
Langbrygga
Length 260 m.
Depth 8 m.
Warehouses
Tjomekrankaia
Length 165 m.
Depth 7 m.
Warehouse


GULHOLMEN
BOTNANESET
Area Under
Development
INSTE ROTAVAGEN
SANKT
HELENA
ROTAVAGEN
LANGHOLMEN
GJERTVAGNESET
FLOREVIKA
KRINGLESKJERET
PLASSANE
Quays
HAMNEFLUA
Quays
SOLBAKKEN
GADDEVAGEN
Shipyard
FLORO
FLORO
LOCATION & DEVELOPMENT PLAN
DEPTHS IN METRES



FLORO

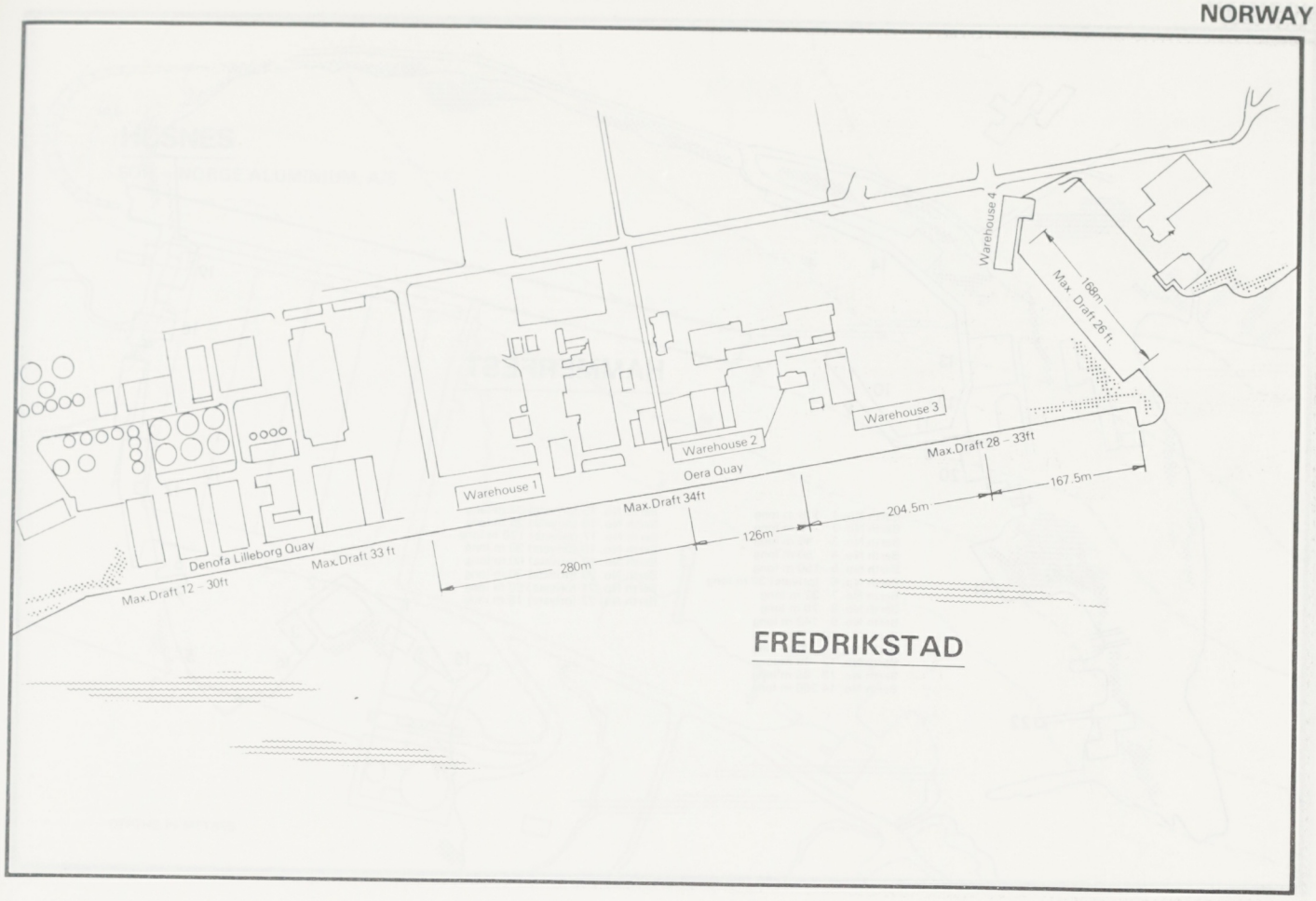
DEPTHS IN FEET



FRAFJORD

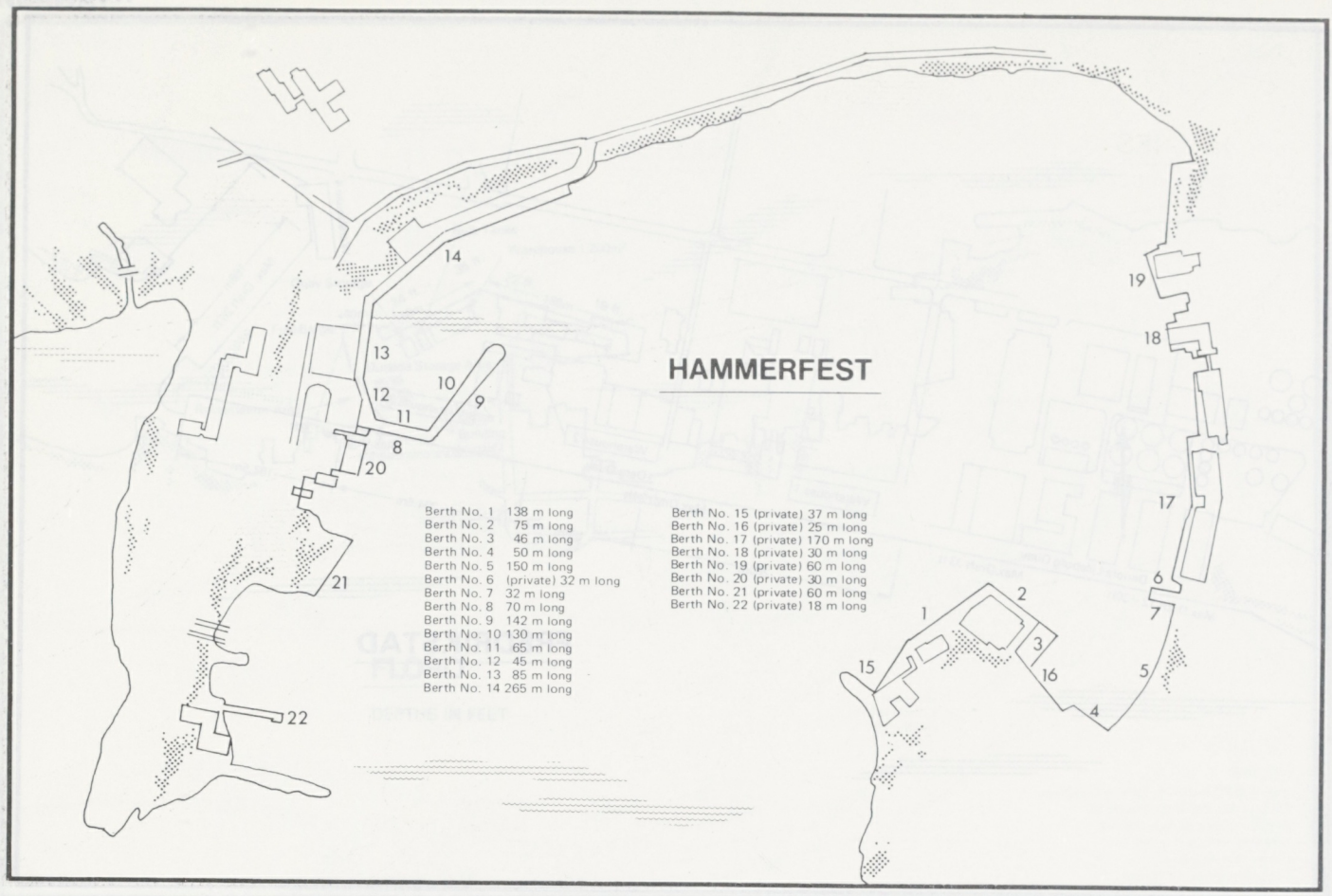
MOORING DIAGRAM

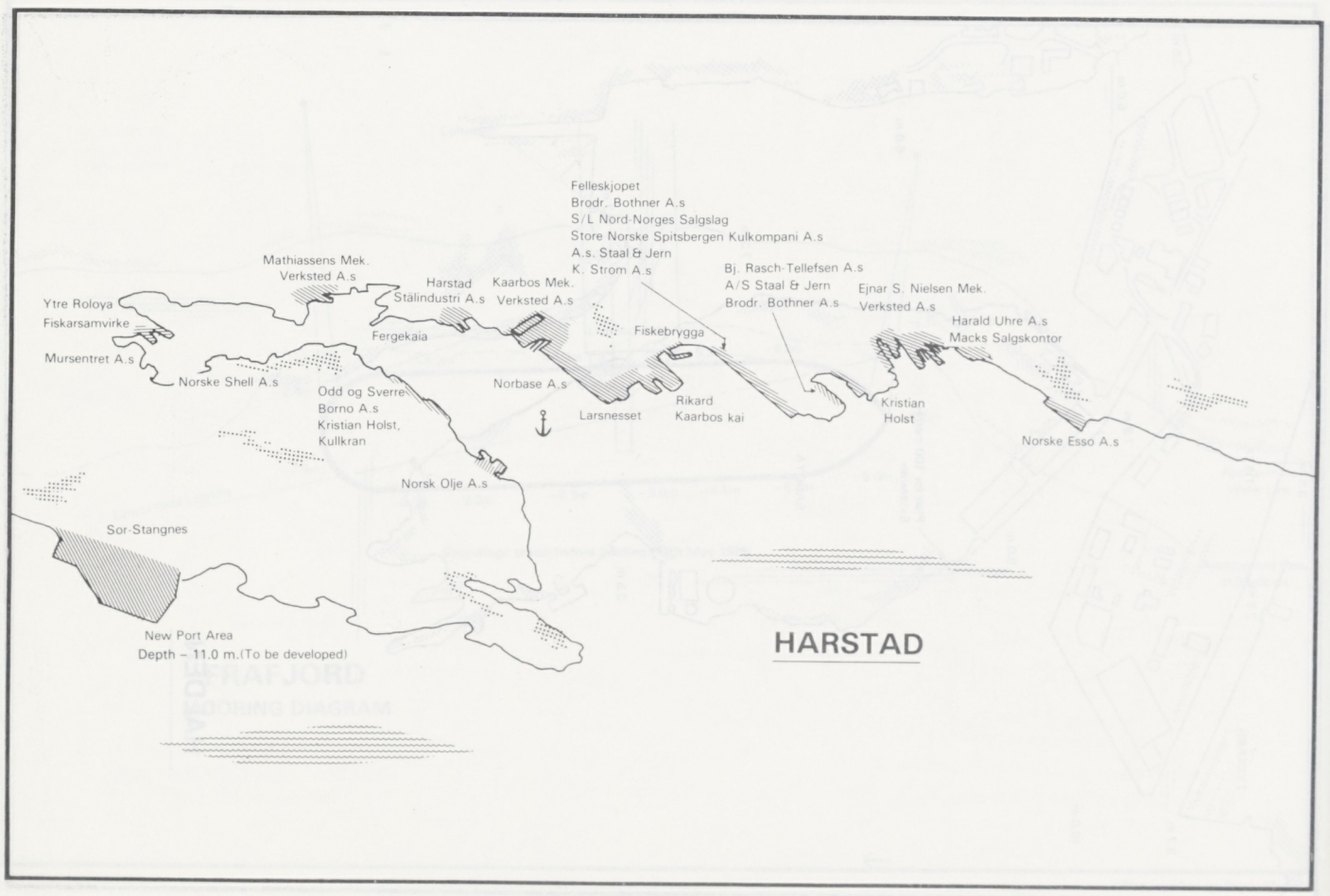
"Plan supplied by Ship's Master"

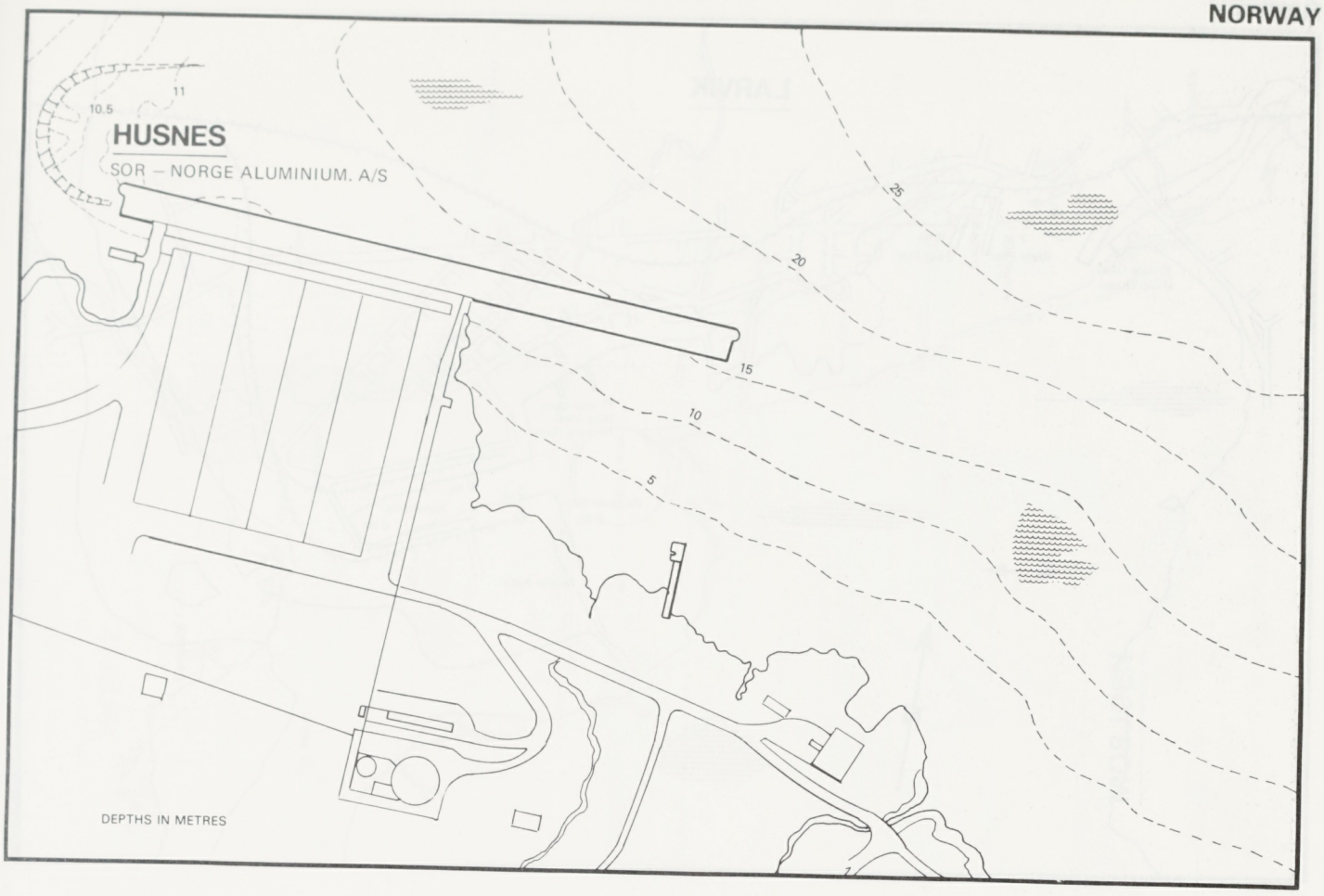


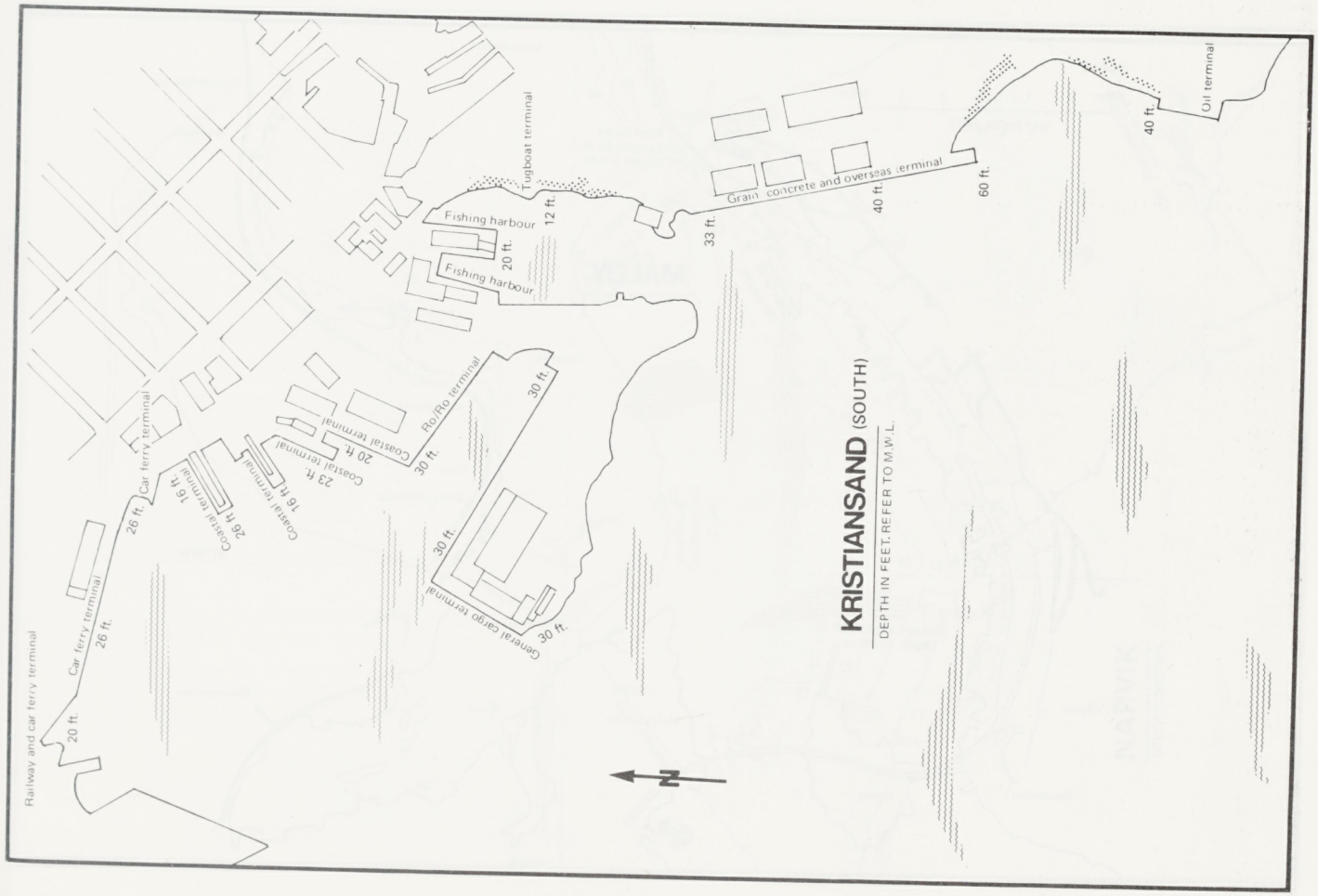
FREDRIKSTAD

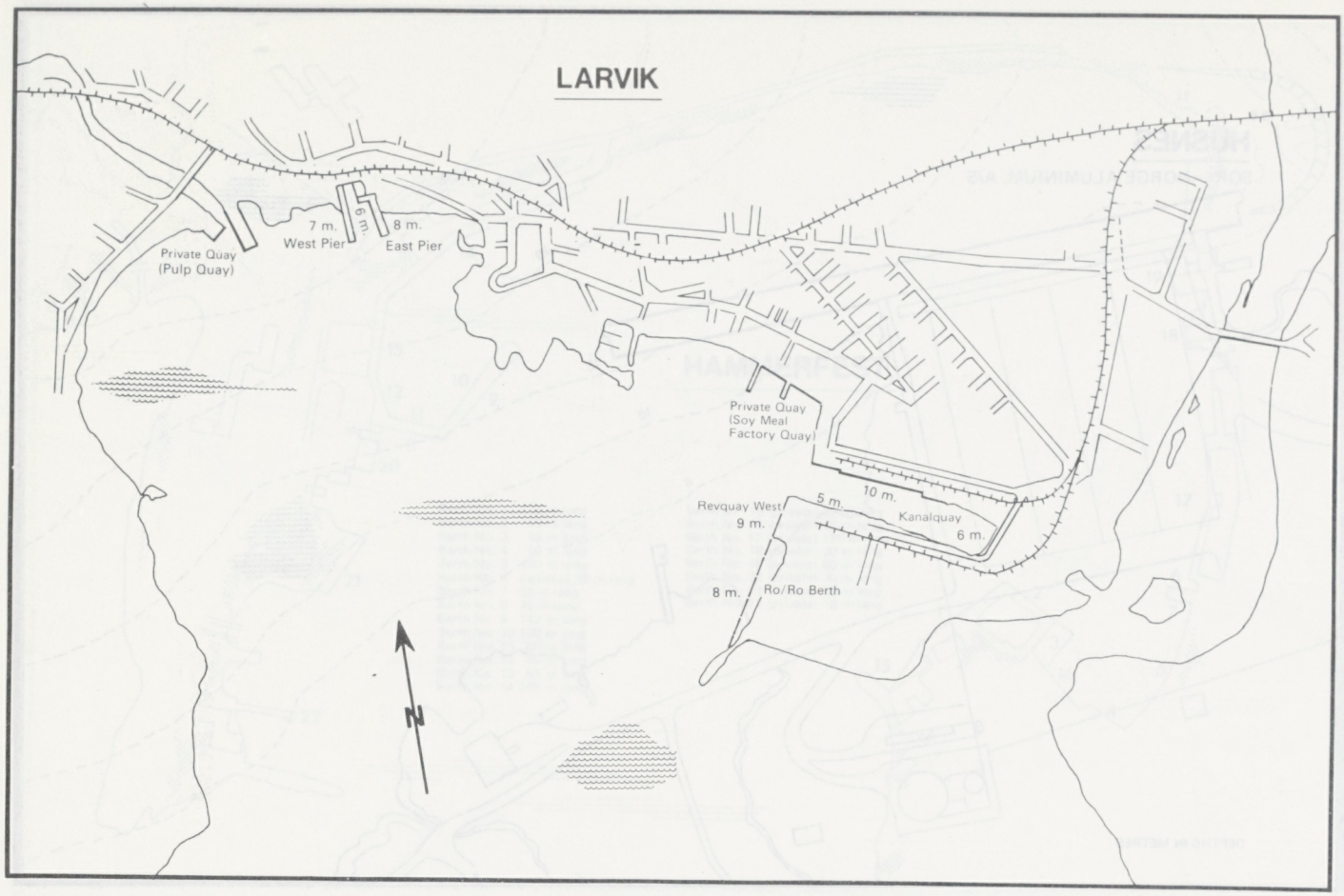
HALDEN

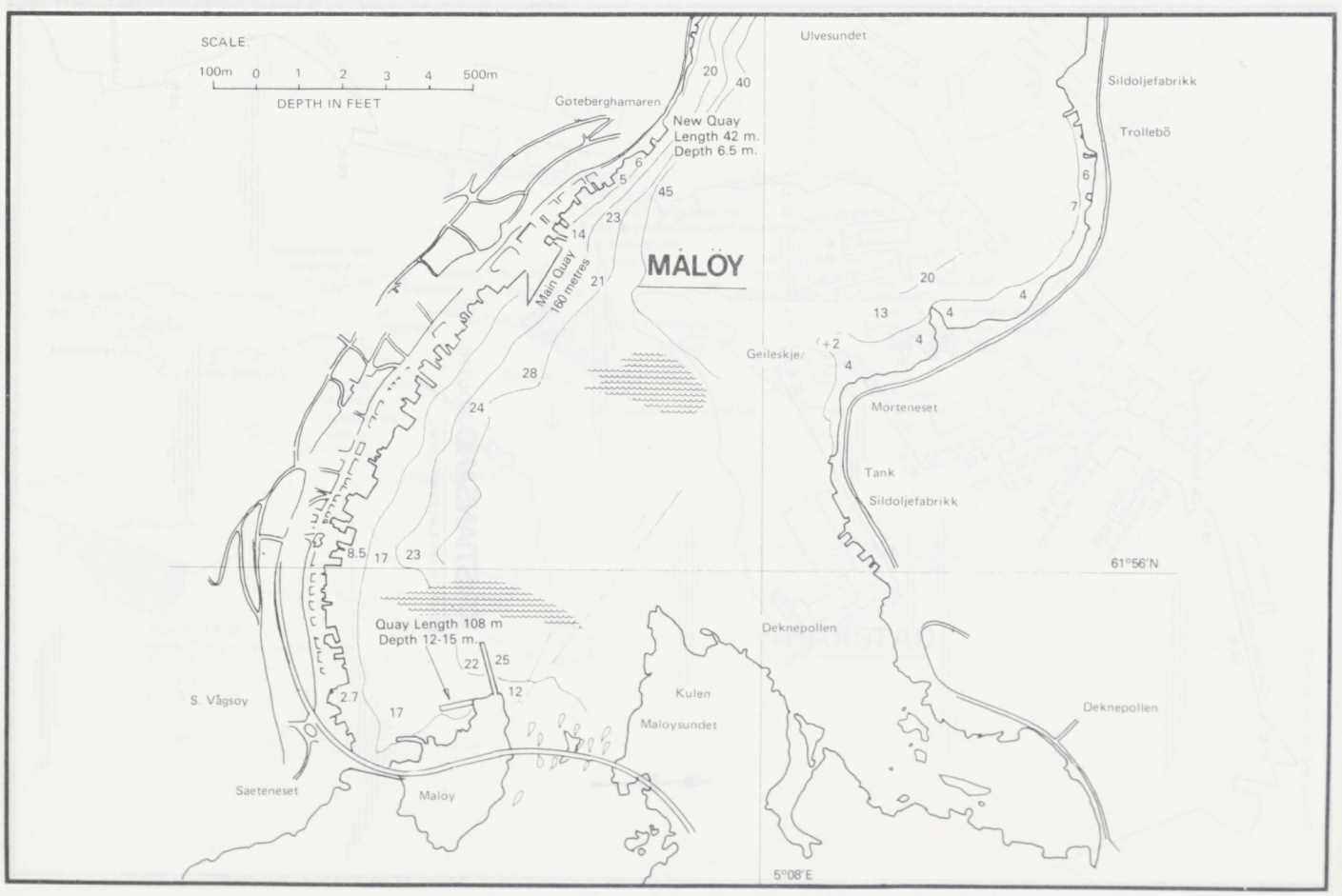

HAMMERFEST
Berth No. 1 138 m long
Berth No. 2 75 m long
Berth No. 3 46 m long
Berth No. 4 50 m long
Berth No. 5 150 m long
Berth No. 6 (private) 32 m long
Berth No. 7 32 m long
Berth No. 8 70 m long
Berth No. 9 142 m long
Berth No. 10 130 m long
Berth No. 11 65 m long
Berth No. 12 45 m long
Berth No. 13 85 m long
Berth No. 14 265 m long
Berth No. 15 (private) 37 m long
Berth No. 16 (private) 25 m long
Berth No. 17 (private) 170 m long
Berth No. 18 (private) 30 m long
Berth No. 19 (private) 60 m long
Berth No. 20 (private) 30 m long
Berth No. 21 (private) 60 m long
Berth No. 22 (private) 18 m long

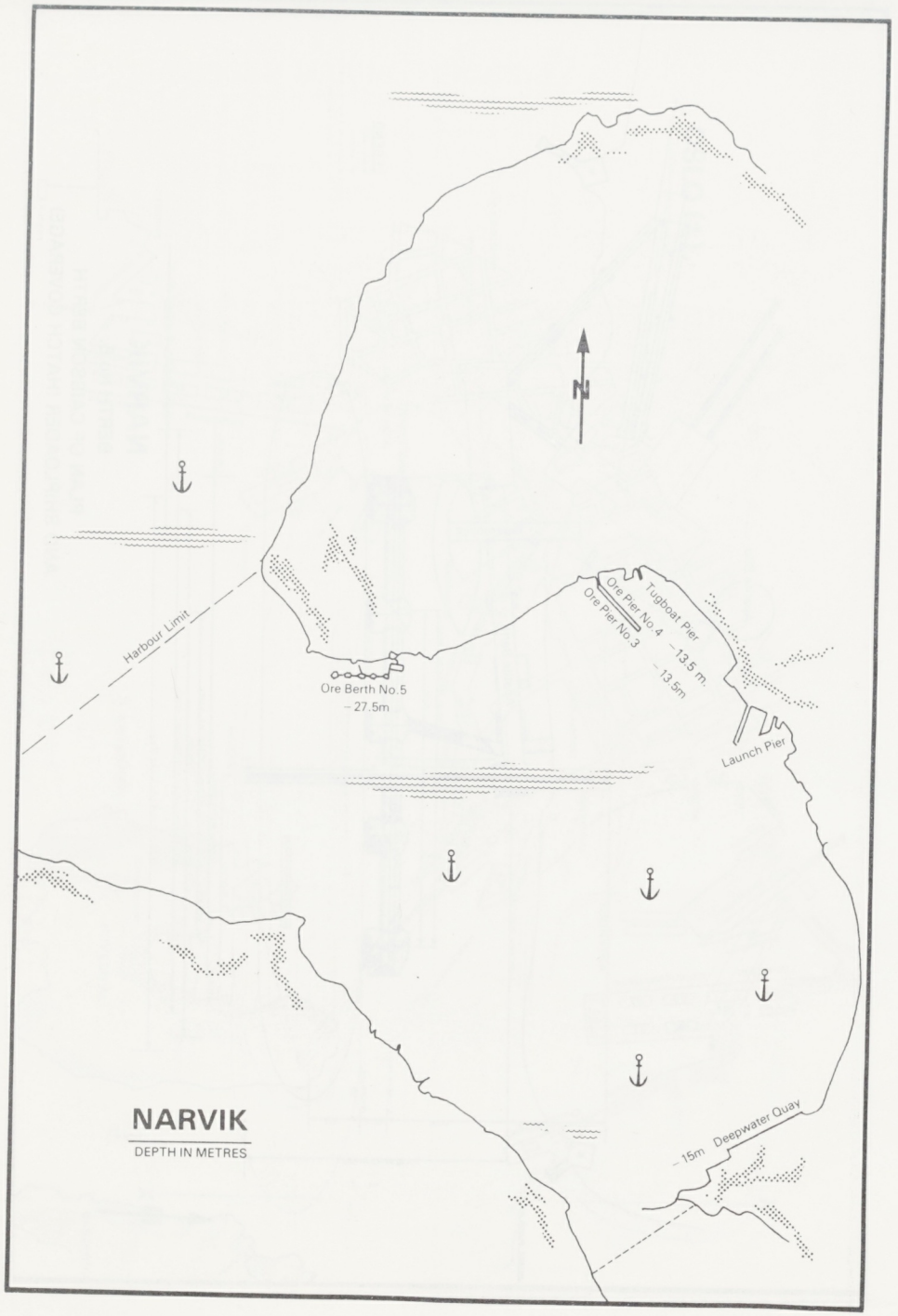

HARSTAD
Felleskjopet
Brodr. Bothner A.s
S/L Nord-Norges Salgslag
Store Norske Spitsbergen Kulkompani A.s
A.s. Staal & Jern
K. Strom A.s
Bj. Rasch-Tellefsen A.s
A/S Staal & Jern
Brodr. Bothner A.s
Ejnar S. Nielsen Mek. Verksted A.s
Harald Uhre A.s
Macks Salgskontor
Mathiassens Mek. Verksted A.s
Harstad Stålindustri A.s
Kaarbos Mek. Verksted A.s
Ytre Roloya Fiskarsamvirke
Fergekaia
Fiskebrygga
Mursentret A.s
Norske Shell A.s
Odd og Sverre Borno A.s
Kristian Holst, Kullkran
Norbase A.s
Larsnesset
Rikard Kaarbos kai
Kristian Holst
Norske Esso A.s
Norsk Olje A.s
Sor-Stangnes
New Port Area
Depth – 11.0 m.(To be developed)

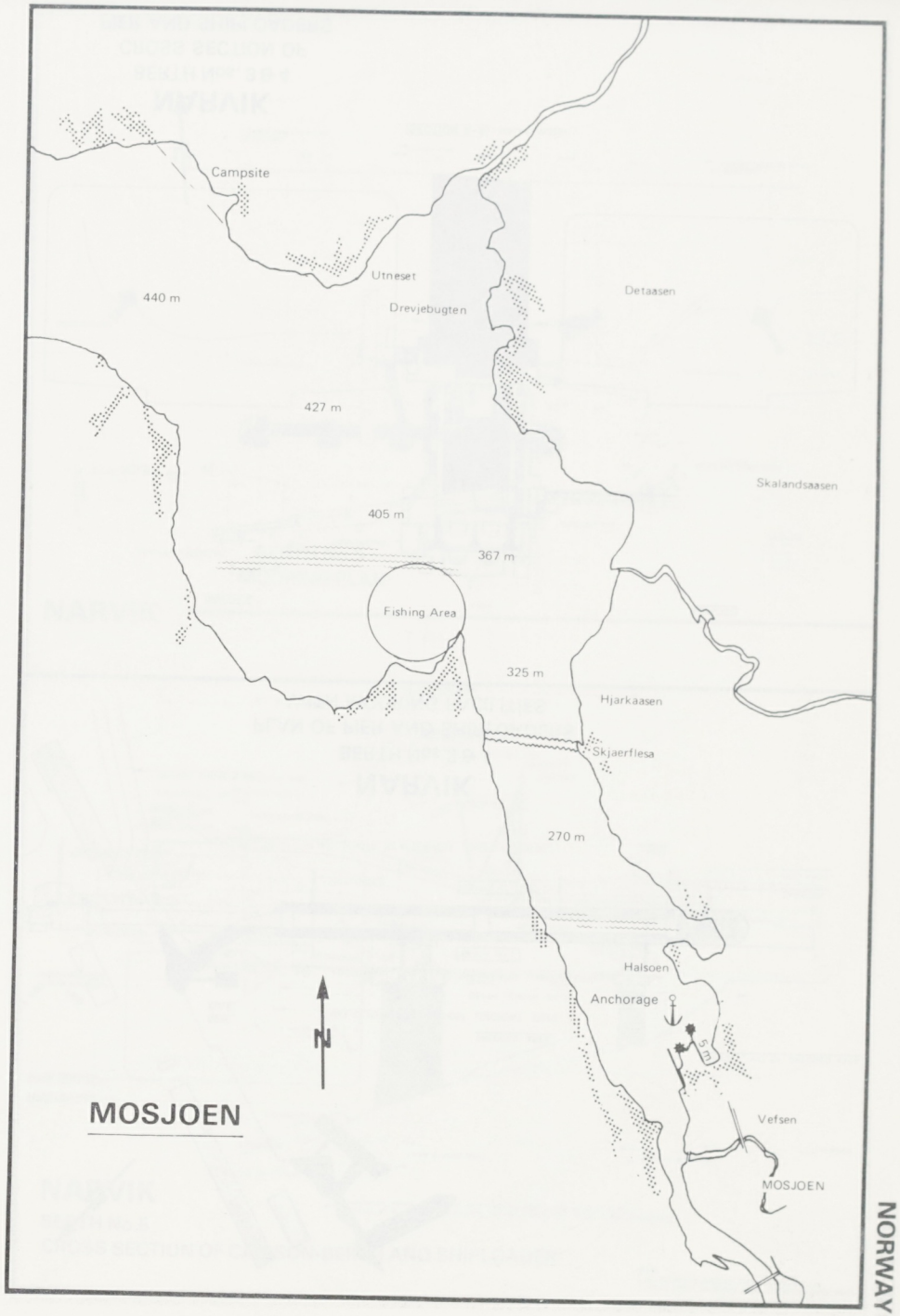

HUSNES
SOR – NORGE ALUMINIUM. A/S
10.5
11
25
20
15
10
5
DEPTHS IN METRES


KRISTIANSAND (SOUTH)
DEPTH IN FEET. REFER TO M.W.L.
Railway and car ferry terminal
Car ferry terminal
26 ft.
20 ft.
Car ferry terminal
26 ft.
Coastal terminal
16 ft.
Coastal terminal
26 ft.
Coastal terminal
23 ft.
Coastal terminal
20 ft.
Ro/Ro terminal
30 ft.
30 ft.
General cargo terminal
30 ft.
30 ft.
Fishing harbour
20 ft.
Fishing harbour
12 ft.
Tugboat terminal
33 ft.
Grain concrete and overseas terminal
40 ft.
60 ft.
40 ft.
Oil terminal
N


LARVIK
7 m.
West Pier
8 m.
East Pier
Private Quay
(Pulp Quay)
Private Quay
(Soy Meal
Factory Quay)
Revquay West
9 m.
5 m.
10 m.
Kanalquay
6 m.
8 m.
Ro/Ro Berth
N

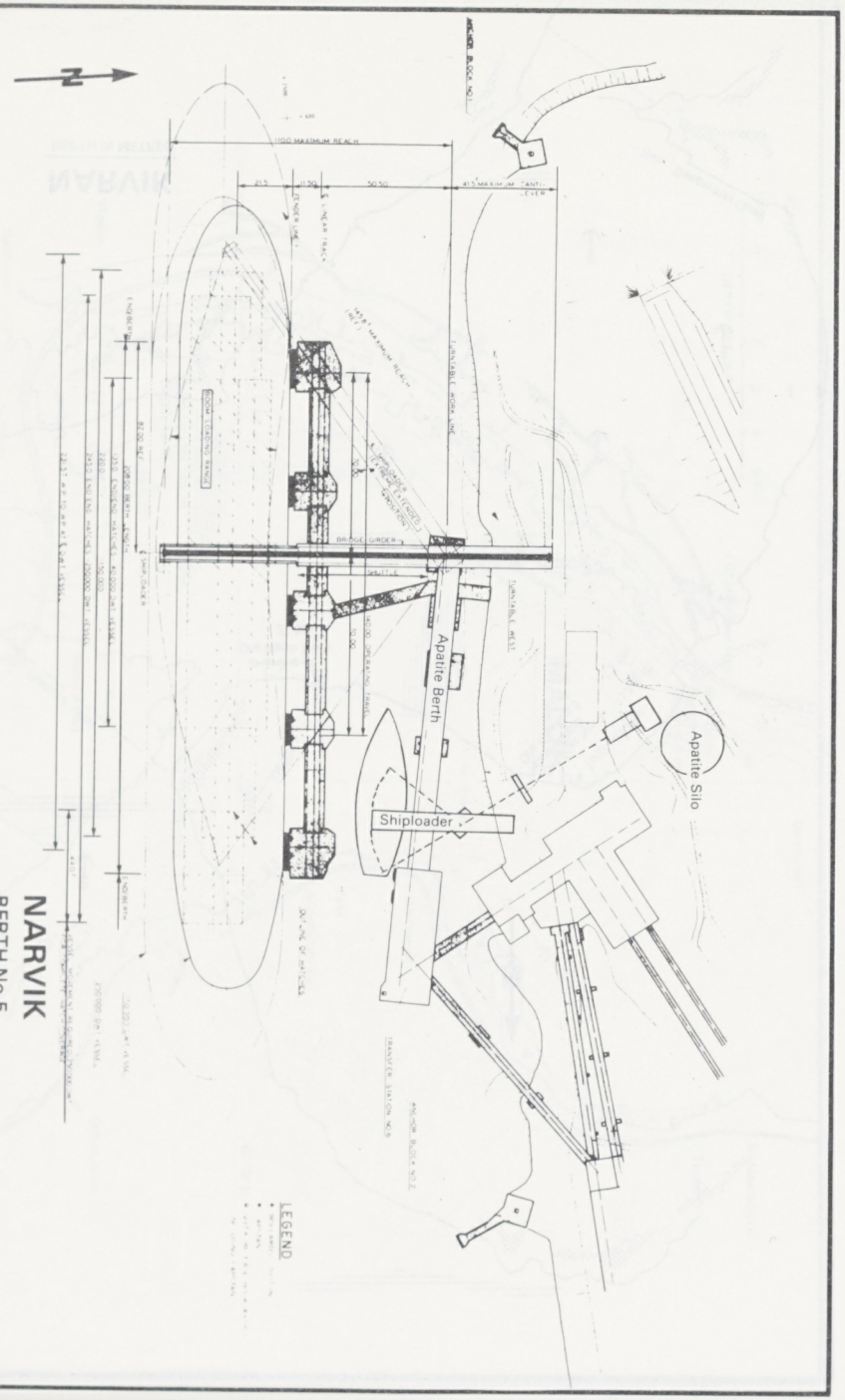

SCALE
100m 0 1 2 3 4 500m
DEPTH IN FEET
Ulvesundet
Sildoljefabrikk
Trollebö
Goteberghamaren
New Quay
Length 42 m.
Depth 6.5 m.
MÅLÖY
Main Quay
160 metres
Geileskjer
Morteneset
Tank
Sildoljefabrikk
61°56'N
Quay Length 108 m
Depth 12-15 m.
Deknepollen
S. Vågsoy
Kulen
Maloysundet
Deknepollen
Saeteneset
Maloy
5°08'E


N
Harbour Limit
Ore Berth No.5
– 27.5m
Ore Pier No.4
Ore Pier No.3
Tugboat Pier
– 13.5 m.
– 13.5m
Launch Pier
– 15m Deepwater Quay
NARVIK
DEPTH IN METRES


Campsite
Utneset
Drevjebugten
440 m
Detaasen
427 m
Skalandsaasen
405 m
367 m
Fishing Area
325 m
Hjarkaasen
Skjaerflesa
270 m
Halsoen
Anchorage
5 m
Vefsen
MOSJOEN
N
MOSJOEN

NORWAY

P577

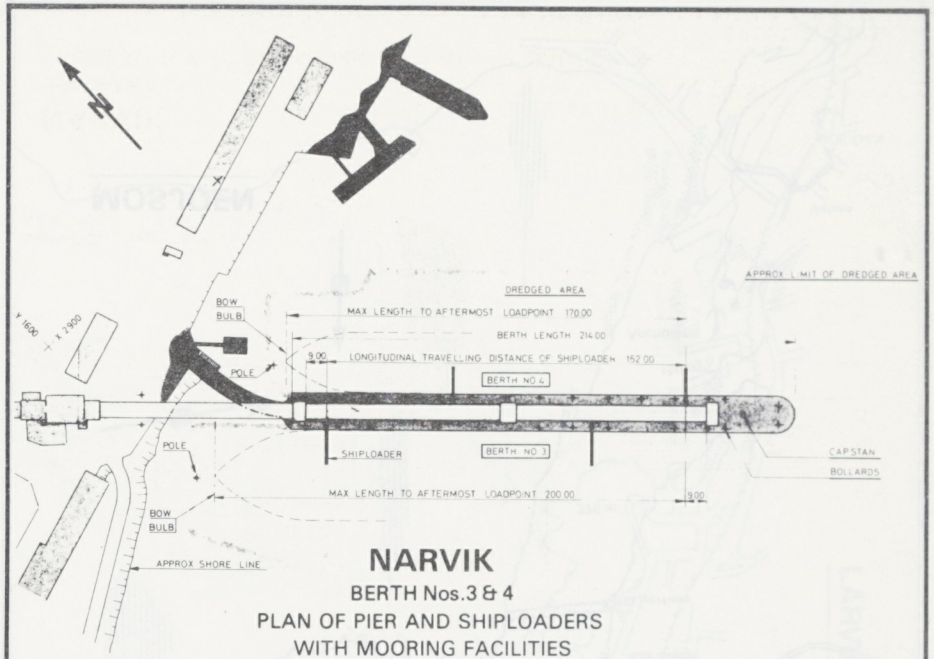


NARVIK

BERTH No.5.

PLAN OF CAISSON BERTH

AND SHIPLOADER (HATCH COVERAGE)

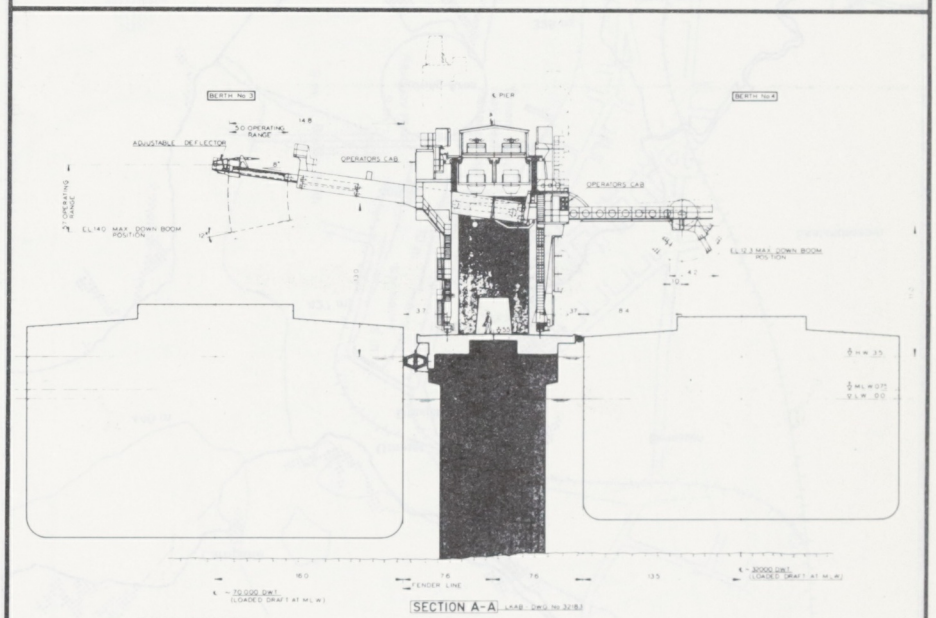


NARVIK

BERTH Nos.3 & 4

PLAN OF PIER AND SHIPLOADERS

WITH MOORING FACILITIES

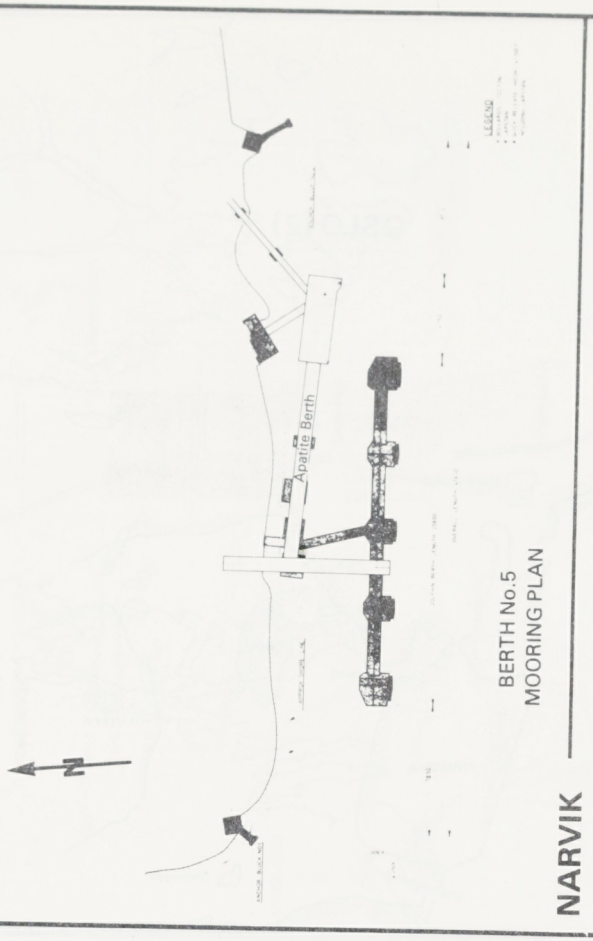


NARVIK

BERTH Nos. 3 & 4

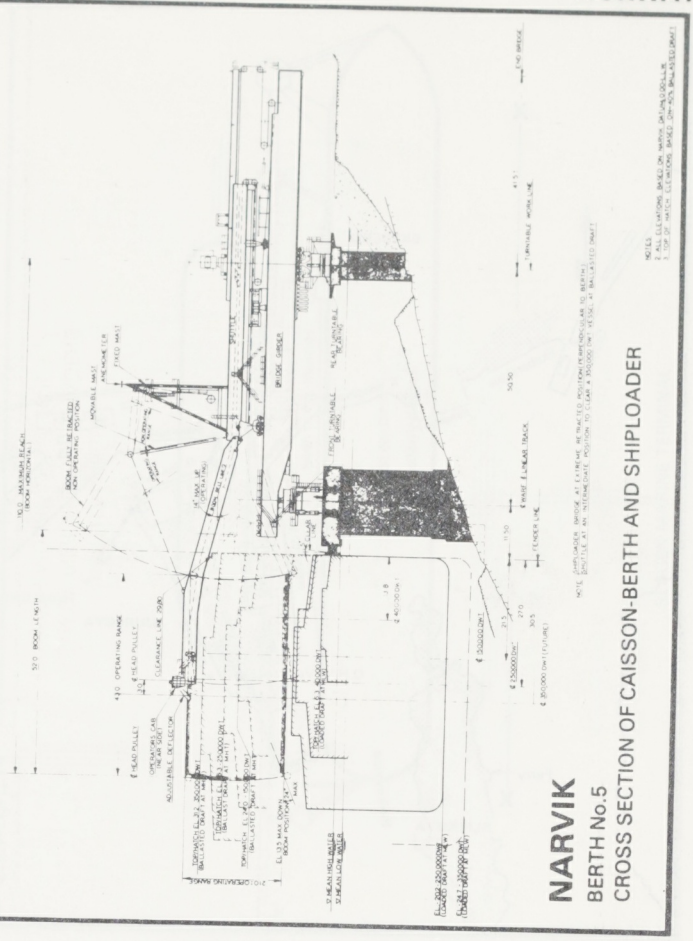
CROSS SECTION OF

PIER AND SHIPLOADERS



BERTH No.5
MOORING PLAN

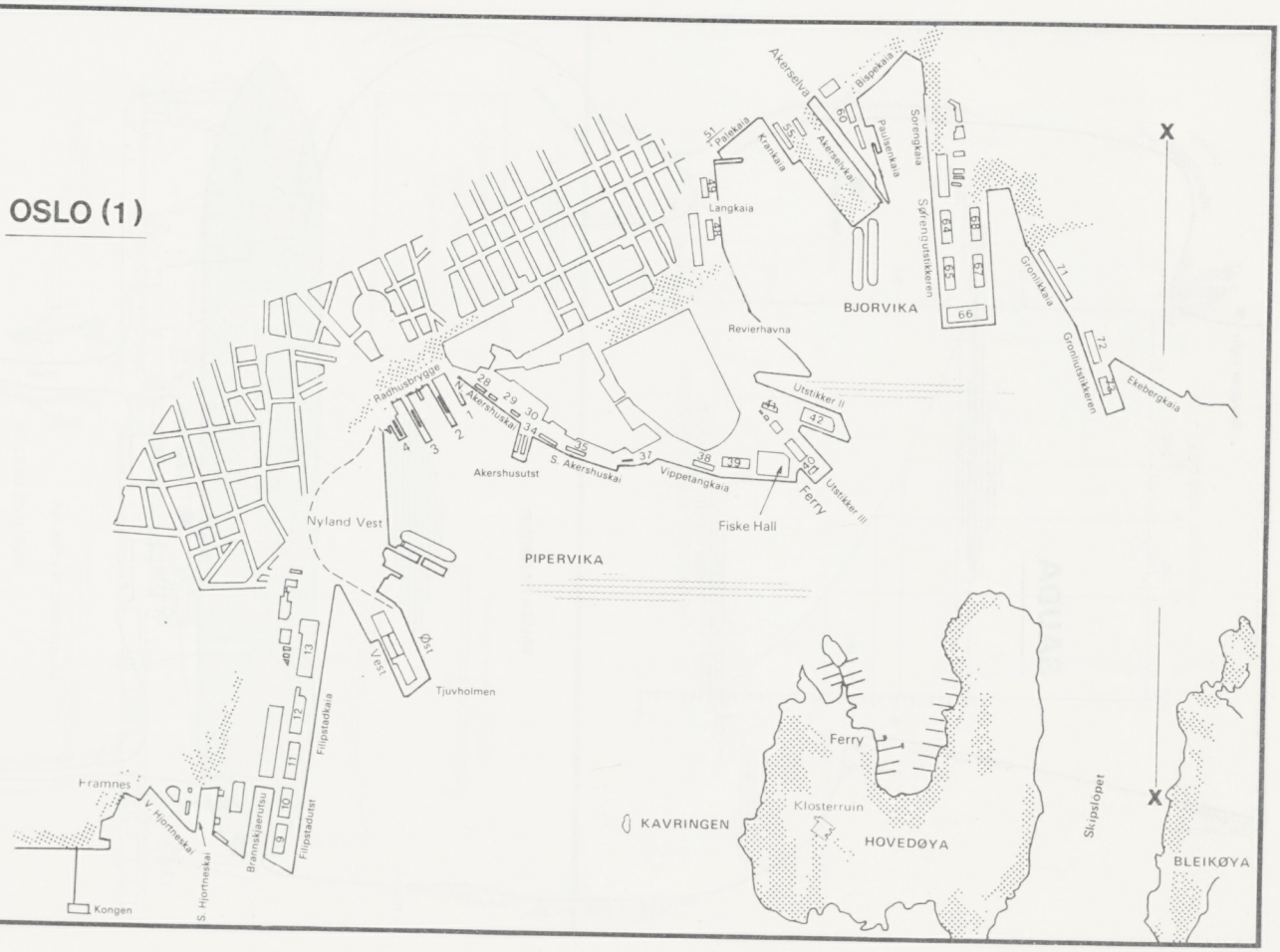
NARVIK

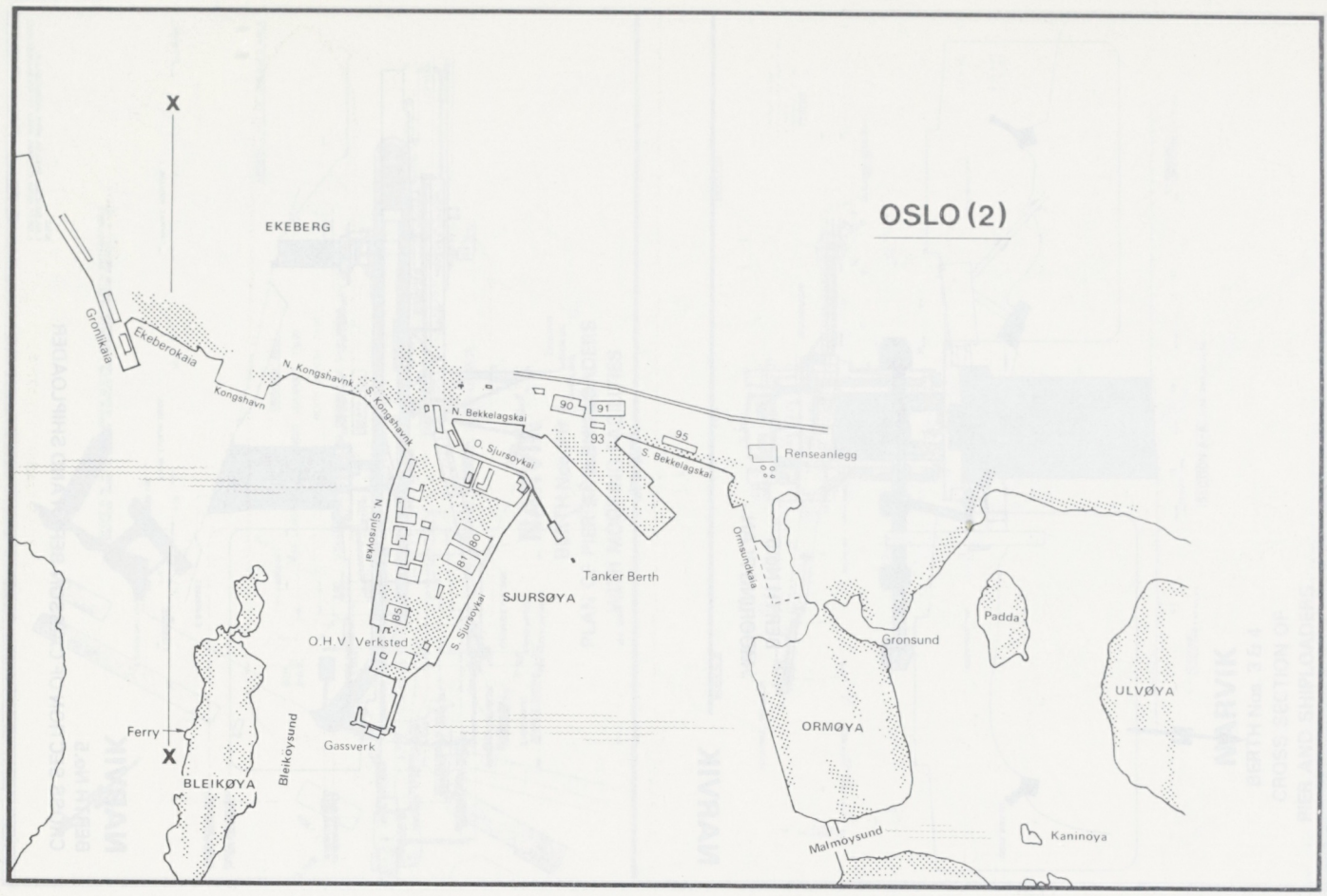


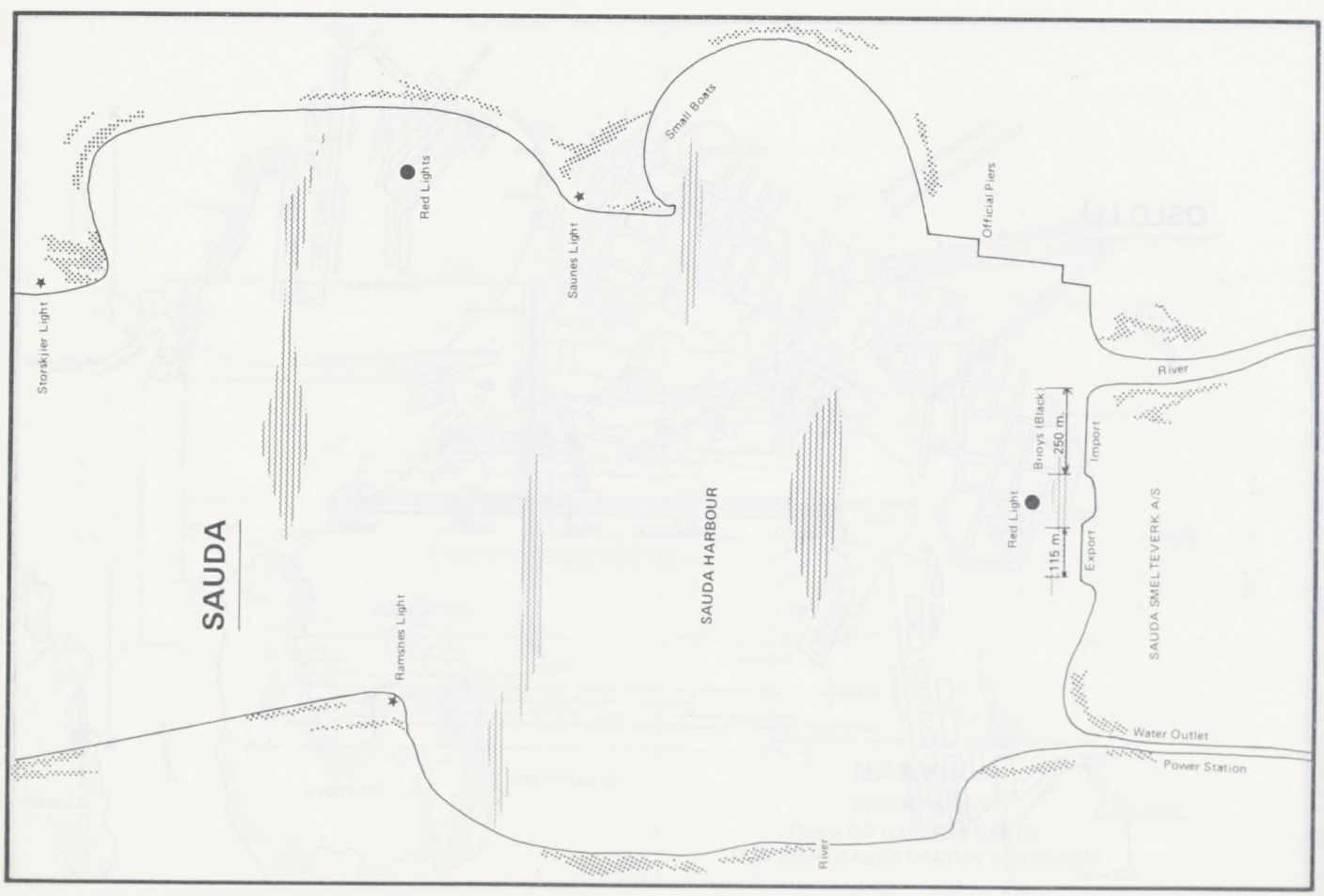
NARVIK

BERTH No.5
CROSS SECTION OF CAISSON-BERTH AND SHIPLOADER

OSLO (1)

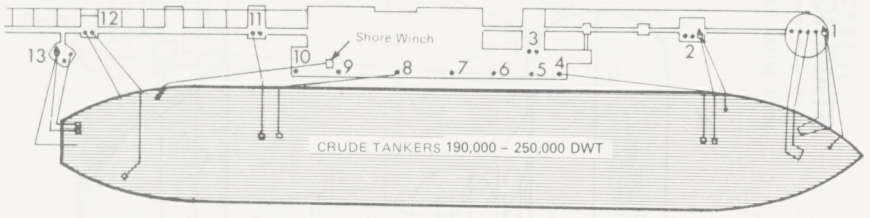


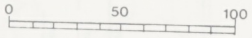

OSLO (2)
EKEBERG
X
Gronlikaia
Ekeberrokaia
Kongshavn
N. Kongshavnk
S. Kongshavnk
N. Bekkelagskai
O. Sjursoykai
90
91
93
95
S. Bekkelagskai
Renseanlegg
N. Sjursoykai
80
81
85
Tanker Berth
SJURSØYA
S. Sjursoykai
Ormsundkaia
O.H.V. Verksted
Gassverk
Ferry
X
BLEIKØYA
Bleikoysund
Gronsund
Padda
ULVØYA
ORMØYA
Malmoysund
Kaninoya


Small Boats
Red Lights
Saunes Light
Official Piers
Storskjer Light
River
Buoys (Black)
250 m.
Import
Red Light
115 m.
Export
SAUDA SMELTEVERK A/S
SAUDA
SAUDA HARBOUR
Ramsnes Light
Water Outlet
Power Station
River

SLAGEN MARINE TERMINAL

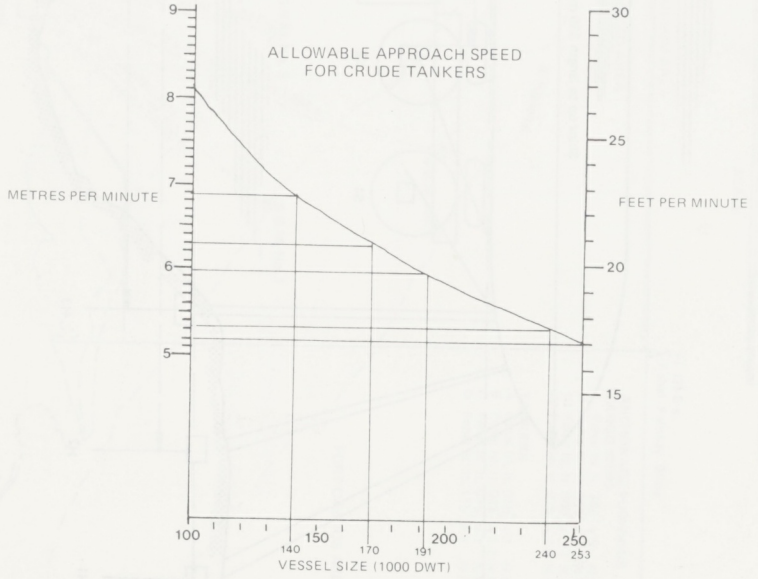
MOORING SKETCH

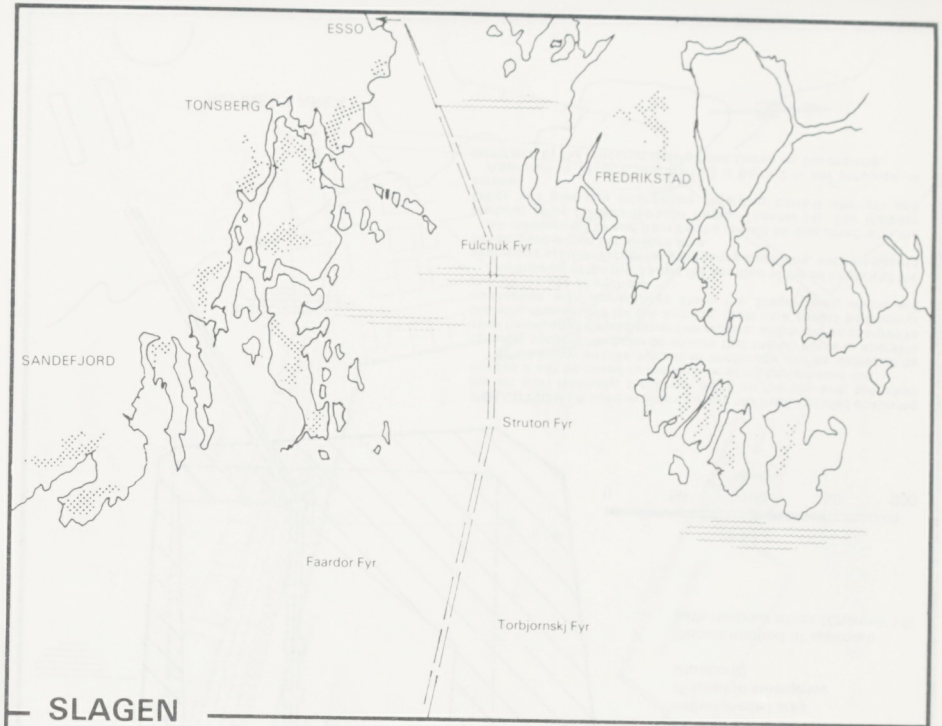




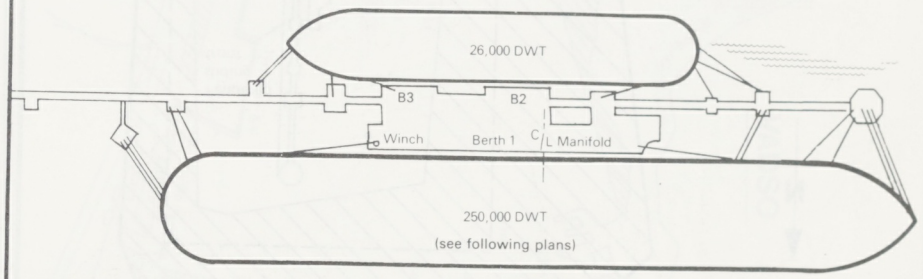
LEGEND

- Quick Release Hook
- Quick Release Pulley
- Shore Based Mooring Winch





SLAGEN



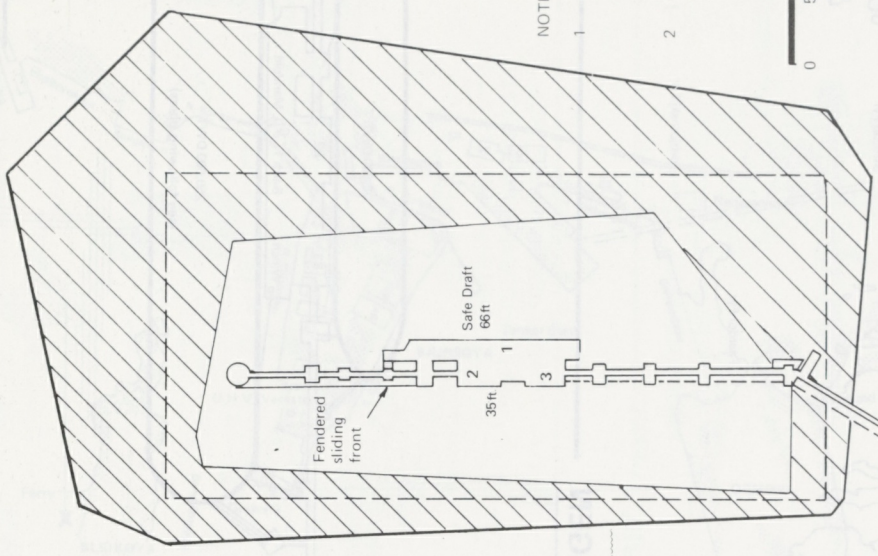
SLAGEN MARINE TERMINAL

NORWAY

P581

SLAGEN PIER

SUBMERSIBLE OIL BOOM INSTALLATION



NOTE:

1 No anchors to be used within shaded area (Except in emergency situations)

2 Discuss method of approach with Harbour office (Channel 14)

SCALE 0 50 100 150 200 Meters

POLLUTION : A submersible oil boom has been installed enclosing the oil pier. Normally, the boom rests on the sea-bed, but when needed it will be raised to the surface using compressed air.

The oil boom and its system of anchorage will be damaged by vessels' anchors. In order to ensure that the oil boom is operable at all times, and to avoid expensive repairs, which will be charged to the ship responsible for the damage, great care should be taken in connection with manoeuvres along the Slagen pier, which will require the use of anchors.

The drawing of the pier shows the position of the oil boom and the anchorage system. Except for emergency situations, anchors should not be used within the shaded area.

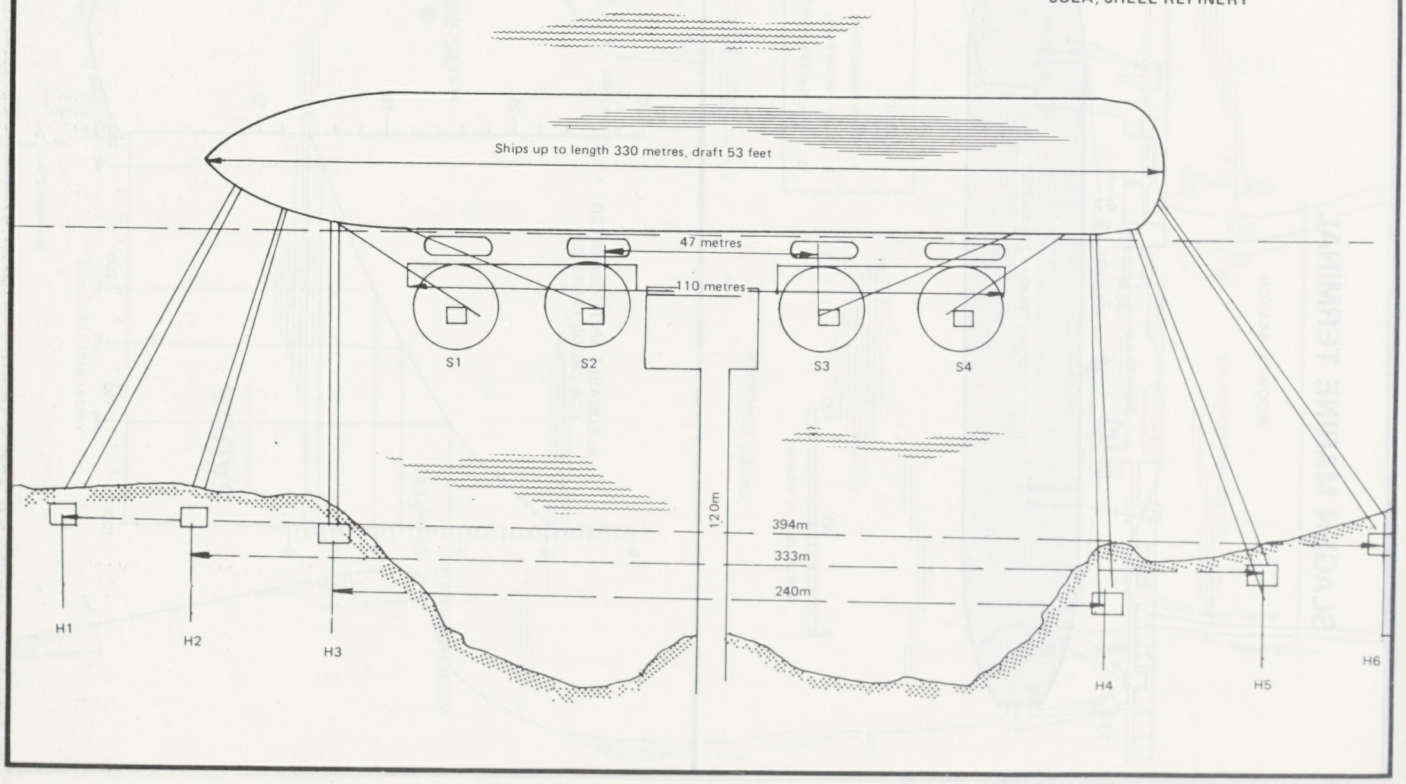
All manoeuvres to and from berths should be discussed with the Harbour office (Slagen Harbour Radio, Channel 14). The Harbour Office will give you information regarding current strength and setting.

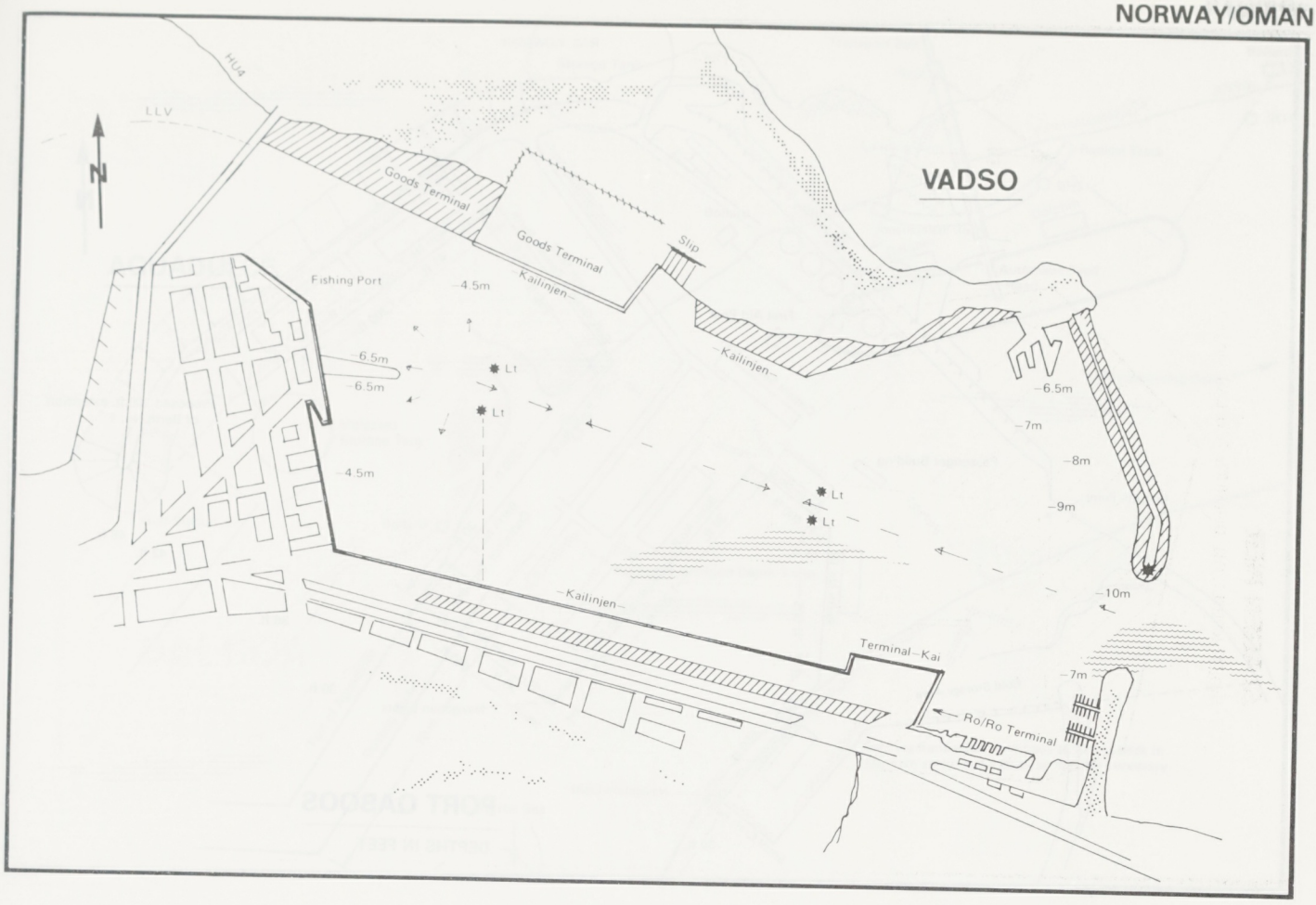
Approach to Berth 2, and Berth 3 if Berth 2 is not occupied, is facilitated by the fendered sliding front shown on the drawing.

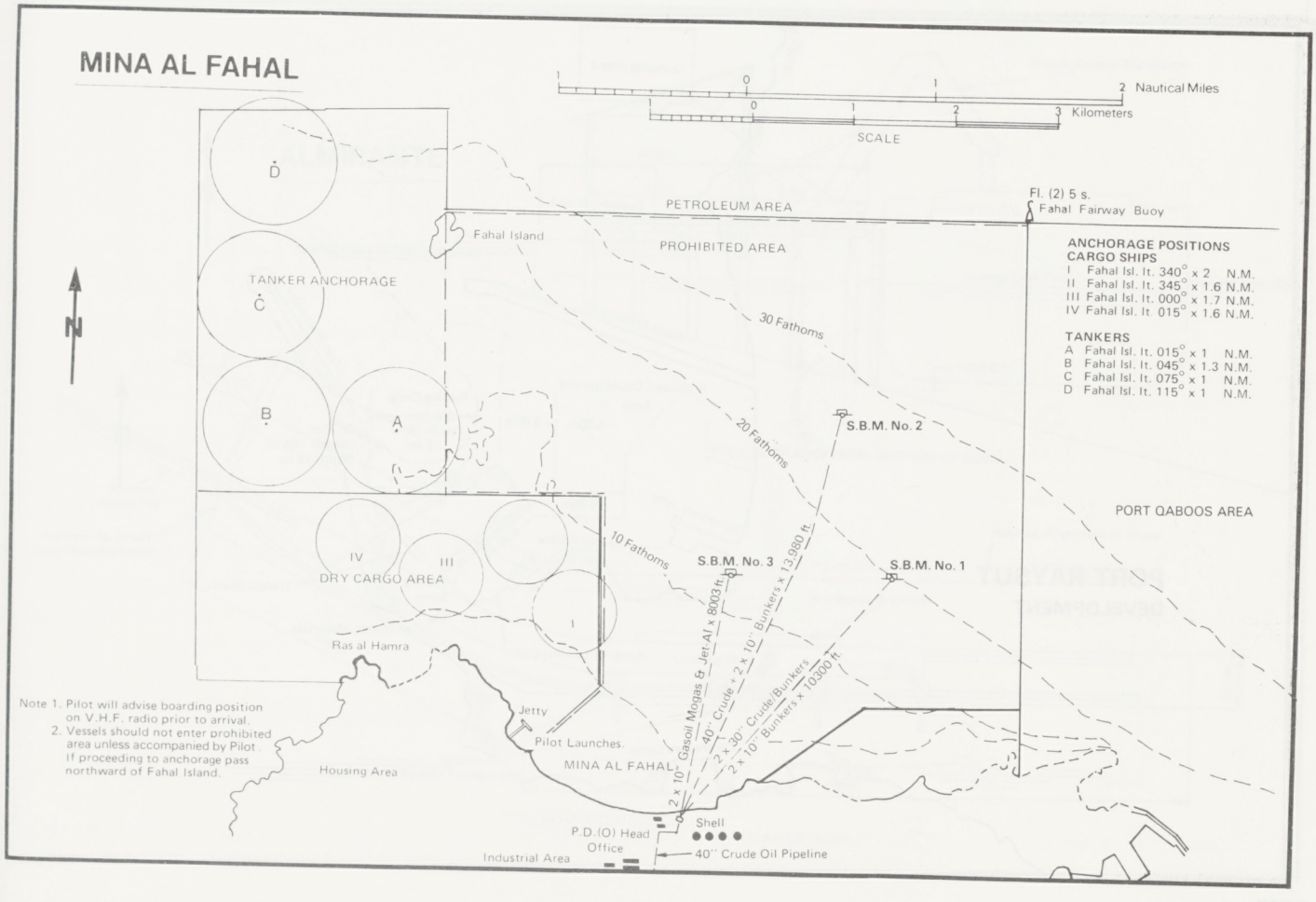
REFINERY AREA

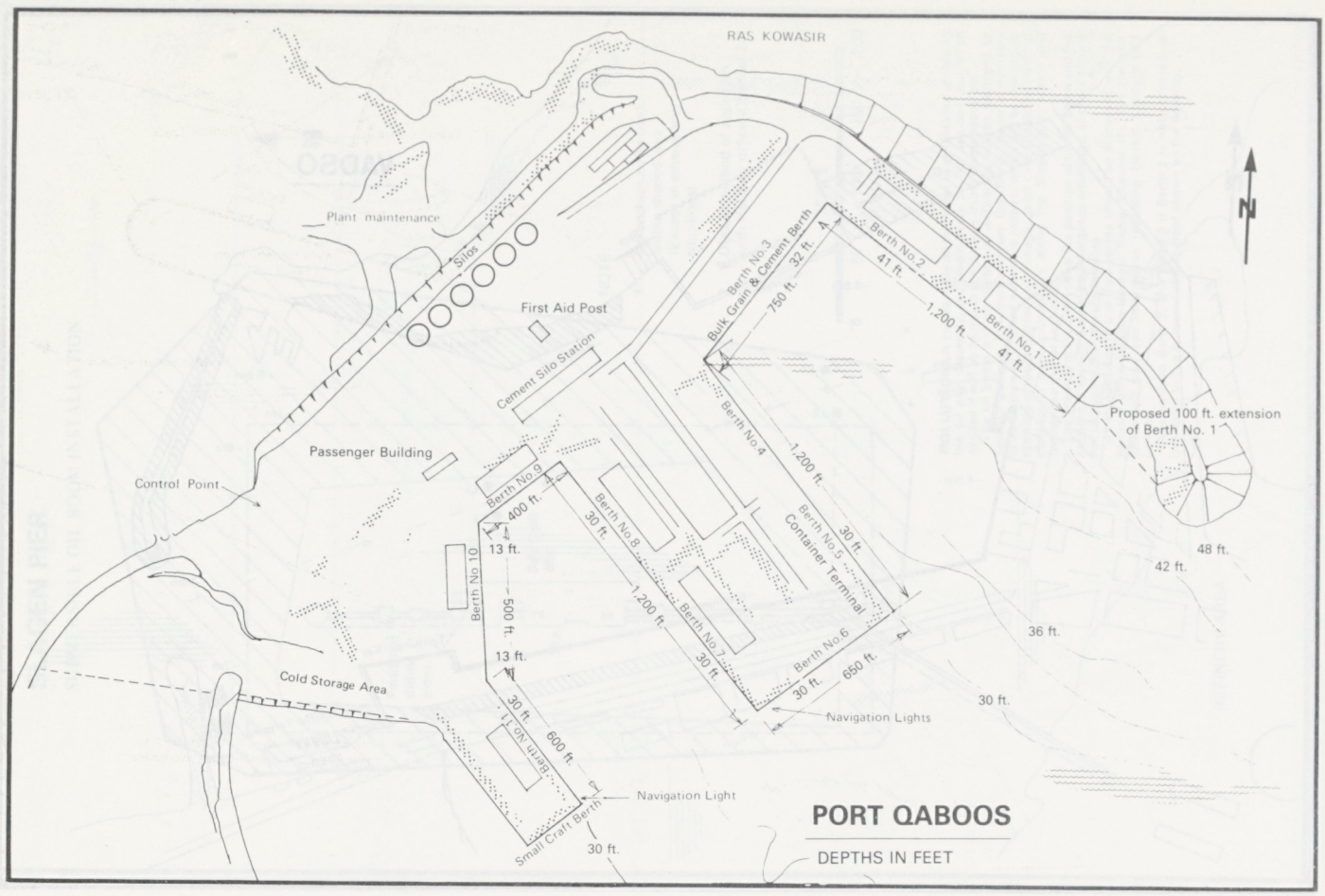
STAVANGER

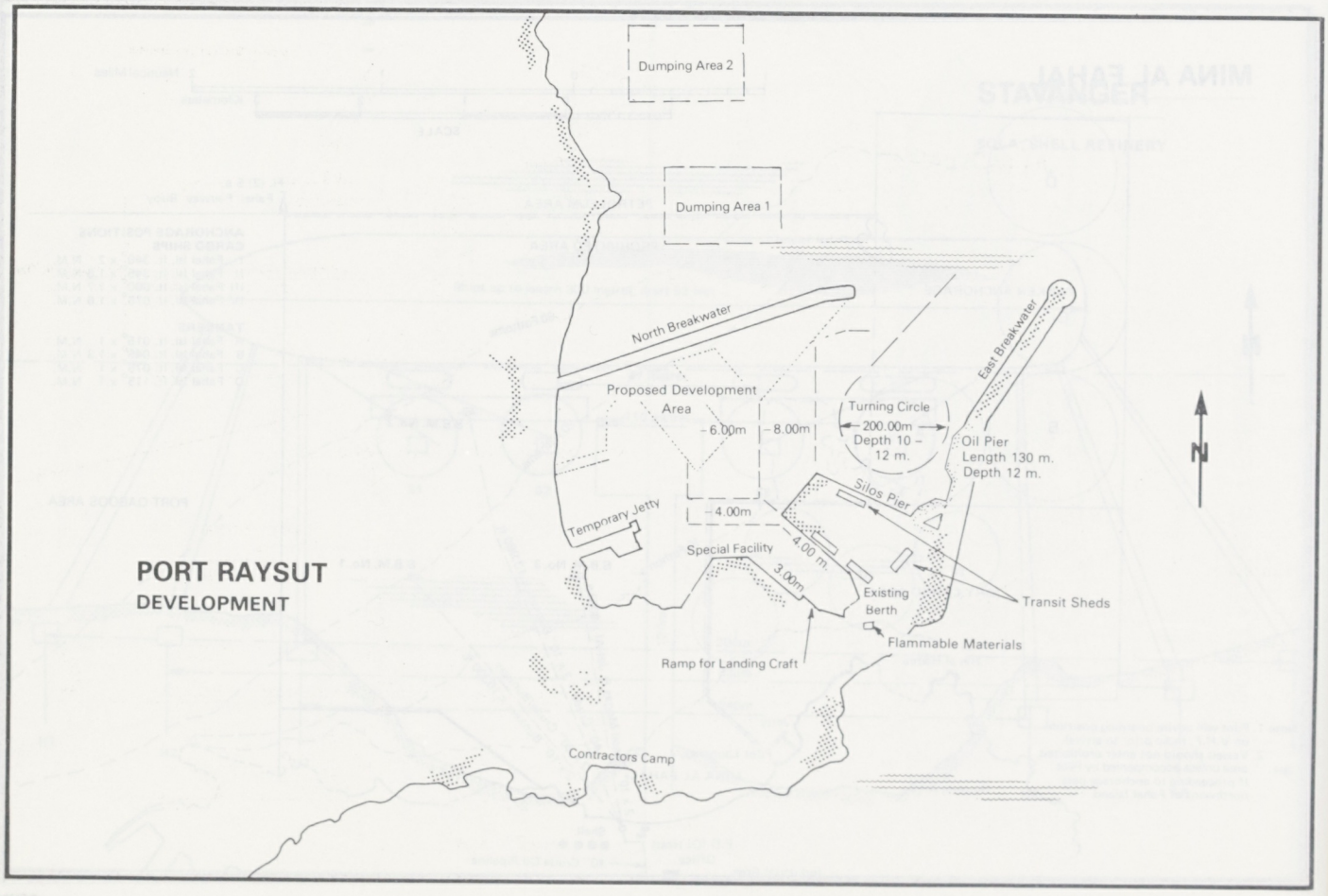
SOLA, SHELL REFINERY

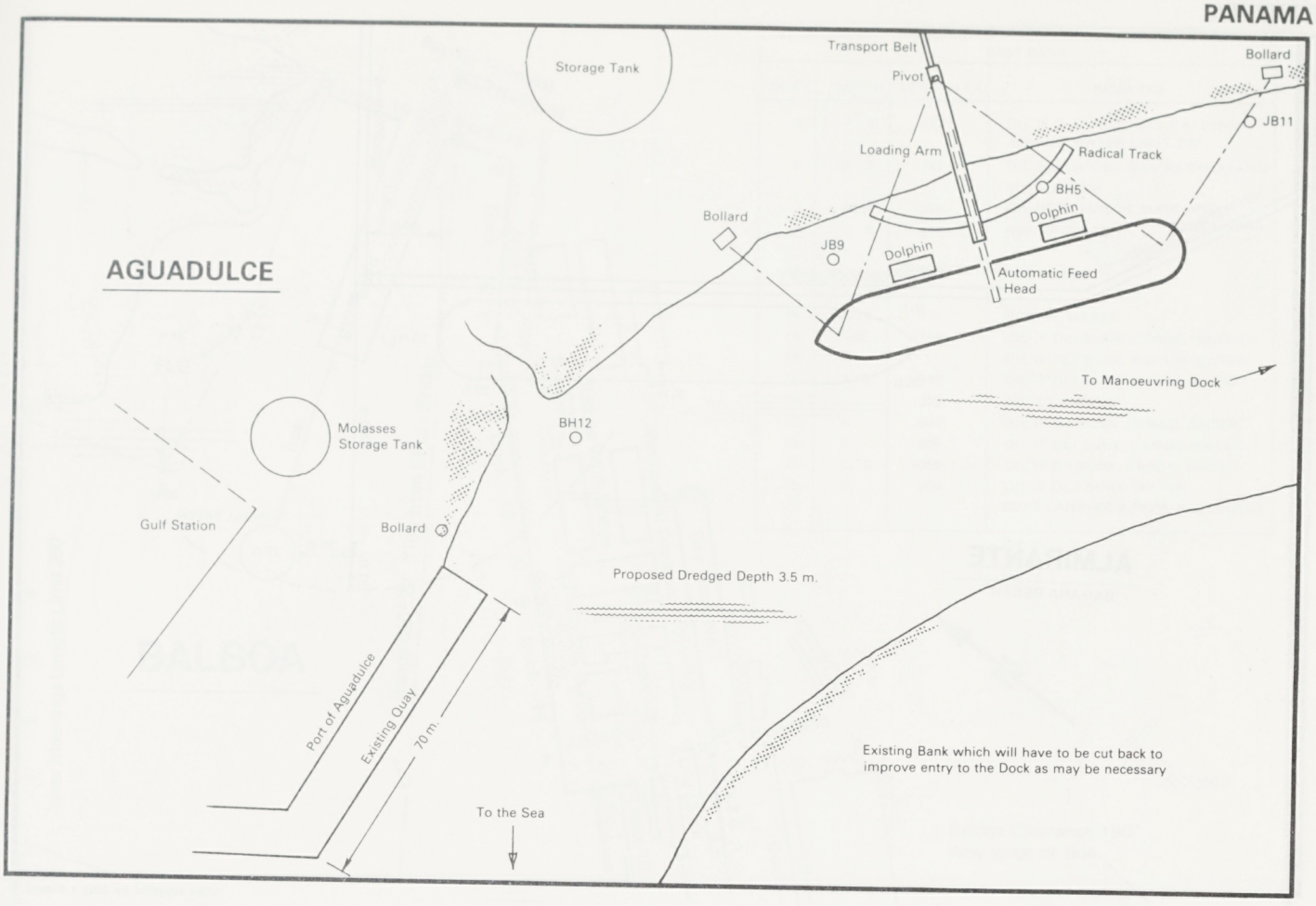


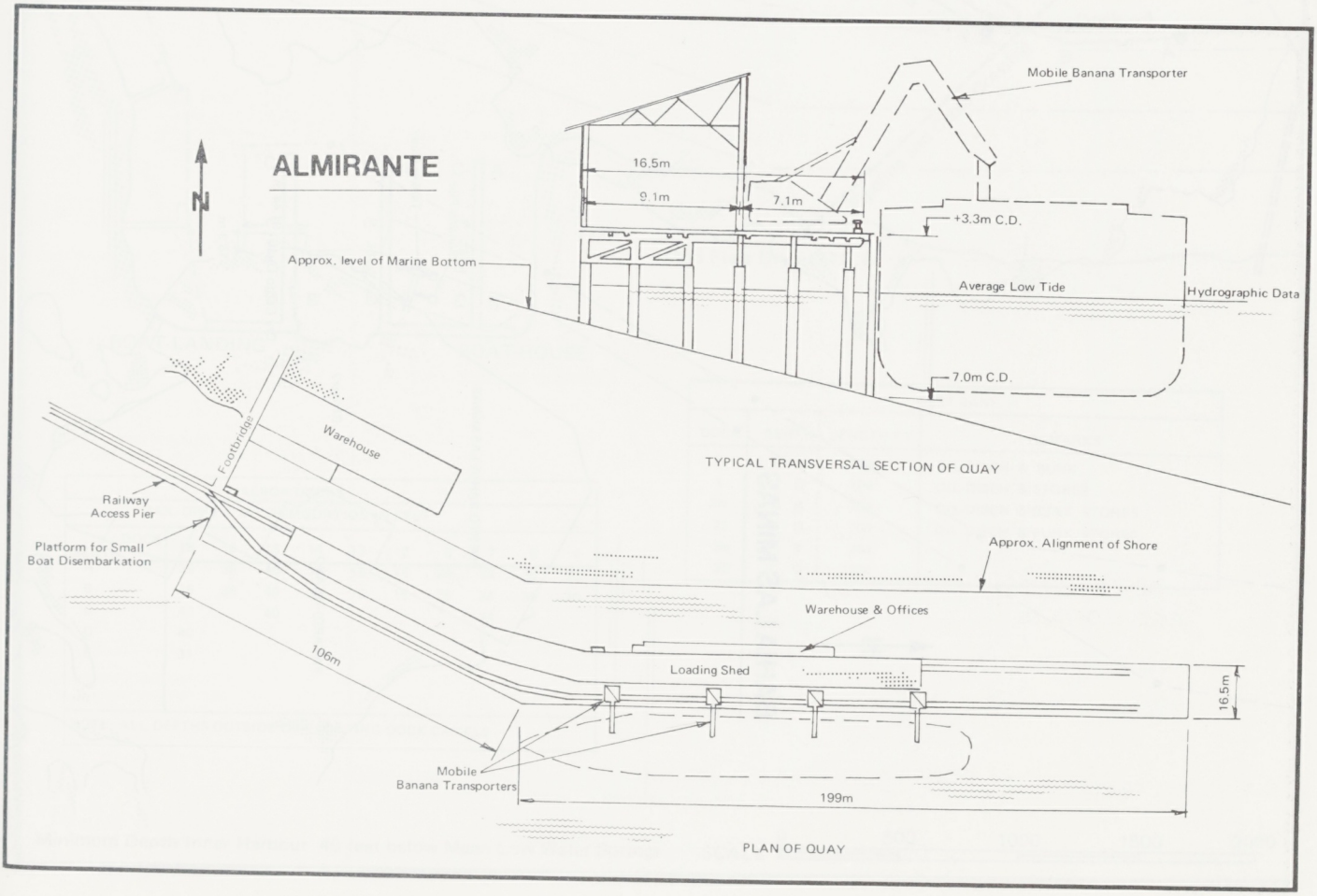

VADSO
N
LLV
HU4
Goods Terminal
Goods Terminal
Slip
Kailinjen
Kailinjen
Fishing Port
4.5m
6.5m
6.5m
Lt
Lt
6.5m
7m
8m
9m
4.5m
Lt
Lt
Kailinjen
10m
Terminal-Kai
7m
Ro/Ro Terminal

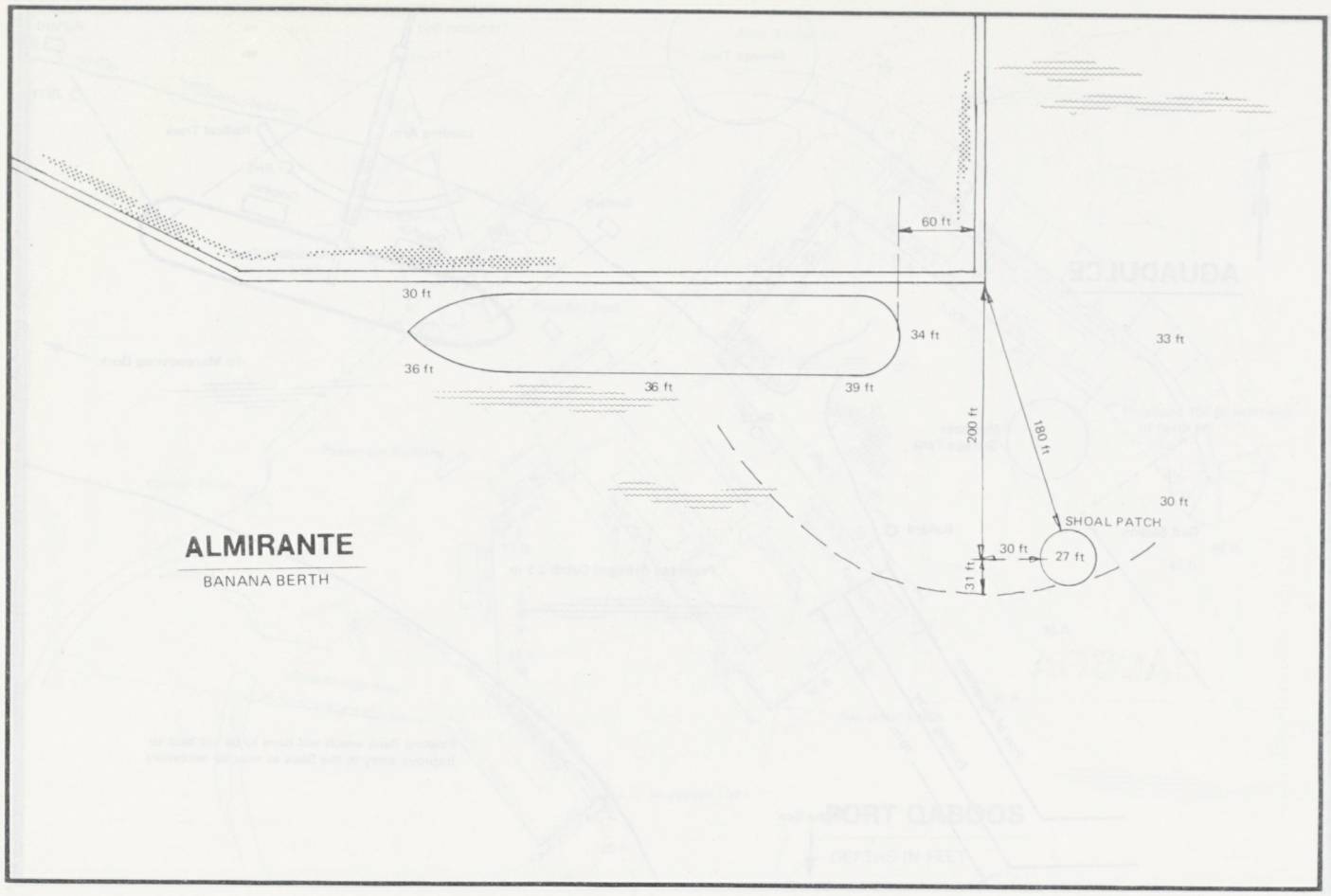

MINA AL FAHAL
1 0 1 2 Nautical Miles
1 0 1 2 3 Kilometers
SCALE
N
D
C
B
A
TANKER ANCHORAGE
PETROLEUM AREA
Fahal Island
PROHIBITED AREA
Fl. (2) 5 s.
Fahal Fairway Buoy
ANCHORAGE POSITIONS
CARGO SHIPS
I Fahal Isl. It. 340° x 2 N.M.
II Fahal Isl. It. 345° x 1.6 N.M.
III Fahal Isl. It. 000° x 1.7 N.M.
IV Fahal Isl. It 015° x 1.6 N.M.
TANKERS
A Fahal Isl. It. 015° x 1 N.M.
B Fahal Isl. It. 045° x 1.3 N.M.
C Fahal Isl. It. 075° x 1 N.M.
D Fahal Isl. It. 115° x 1 N.M.
30 Fathoms
20 Fathoms
S.B.M. No. 2
PORT QABOOS AREA
10 Fathoms
S.B.M. No. 3
S.B.M. No. 1
IV
III
DRY CARGO AREA
I
Ras al Hamra
2 x 10" Gasoil Mogas & Jet A1 x 8003 ft.
40" Crude + 2 x 10" Bunkers x 13,980 ft.
2 x 30" Crude/Bunkers
2 x 10" Bunkers x 10,300 ft.
Note 1. Pilot will advise boarding position on V.H.F. radio prior to arrival.
2. Vessels should not enter prohibited area unless accompanied by Pilot. If proceeding to anchorage pass northward of Fahal Island.
Jetty
Pilot Launches.
MINA AL FAHAL
Housing Area
Shell
P.D.(O) Head Office
Industrial Area
40" Crude Oil Pipeline


RAS KOWASIR
Plant maintenance
Silos
First Aid Post
Cement Silo Station
Passenger Building
Control Point
Berth No.9
400 ft.
13 ft.
Berth No 10
500 ft.
13 ft.
Cold Storage Area
30 ft.
600 ft.
Berth No. 11
Navigation Light
Small Craft Berth
30 ft.
Berth No.8
30 ft.
1,200 ft.
Berth No.7
30 ft.
Berth No.4
1,200 ft.
30 ft.
Container Terminal
Berth No.5
Berth No.6
30 ft.
650 ft.
Navigation Lights
Bulk Grain & Cement Berth
Berth No.3
750 ft.
32 ft.
Berth No.2
41 ft.
1,200 ft.
Berth No.1
41 ft.
Proposed 100 ft. extension of Berth No. 1
48 ft.
42 ft.
36 ft.
30 ft.
N
PORT QABOOS
DEPTHS IN FEET

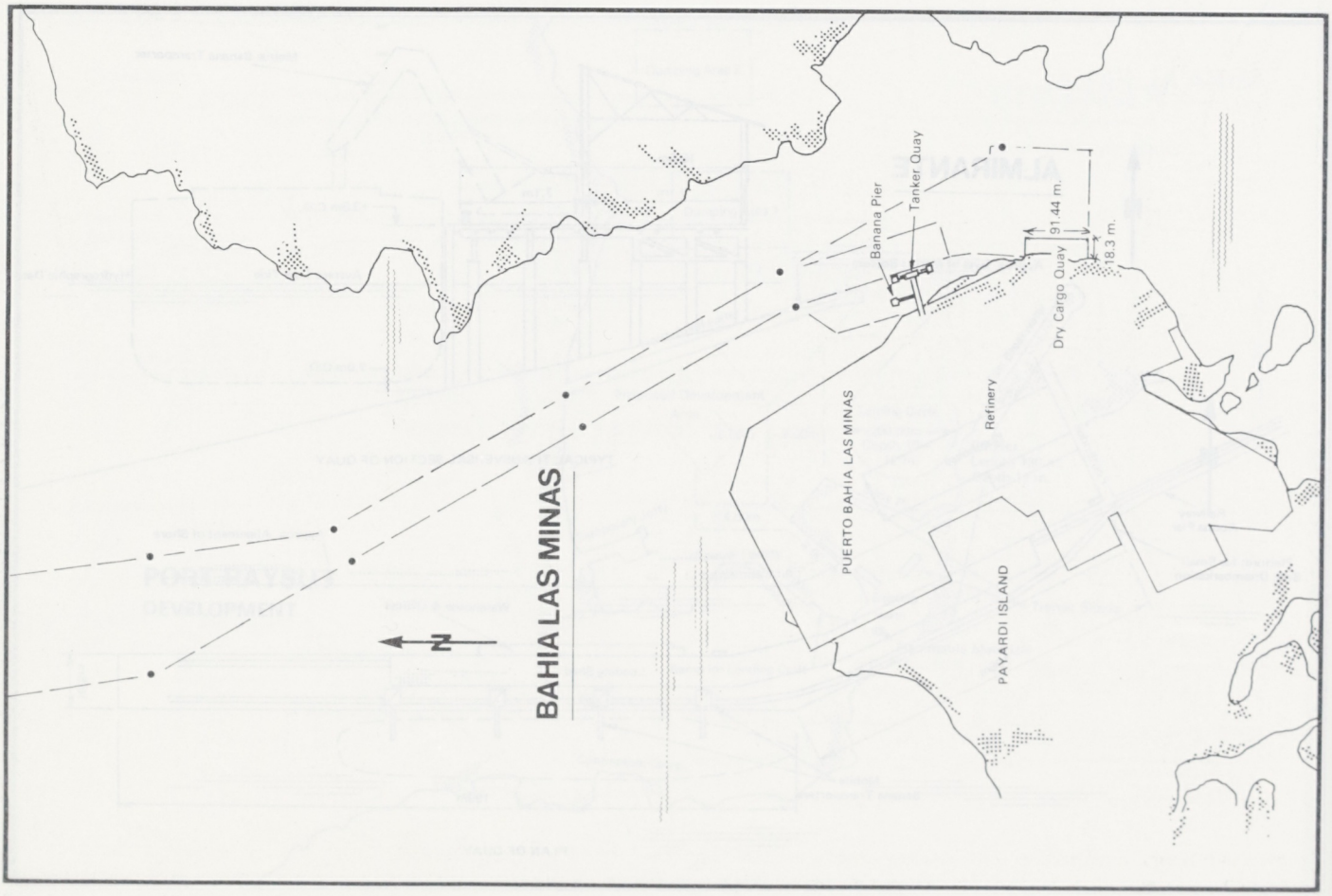

Dumping Area 2
Dumping Area 1
North Breakwater
Proposed Development Area
6.00m
8.00m
Turning Circle
200.00m
Depth 10 – 12 m.
East Breakwater
Oil Pier
Length 130 m.
Depth 12 m.
Silos Pier
Temporary Jetty
4.00m
Special Facility
4.00 m.
3.00m
Existing Berth
Transit Sheds
Flammable Materials
Ramp for Landing Craft
Contractors Camp
N
PORT RAYSUT
DEVELOPMENT

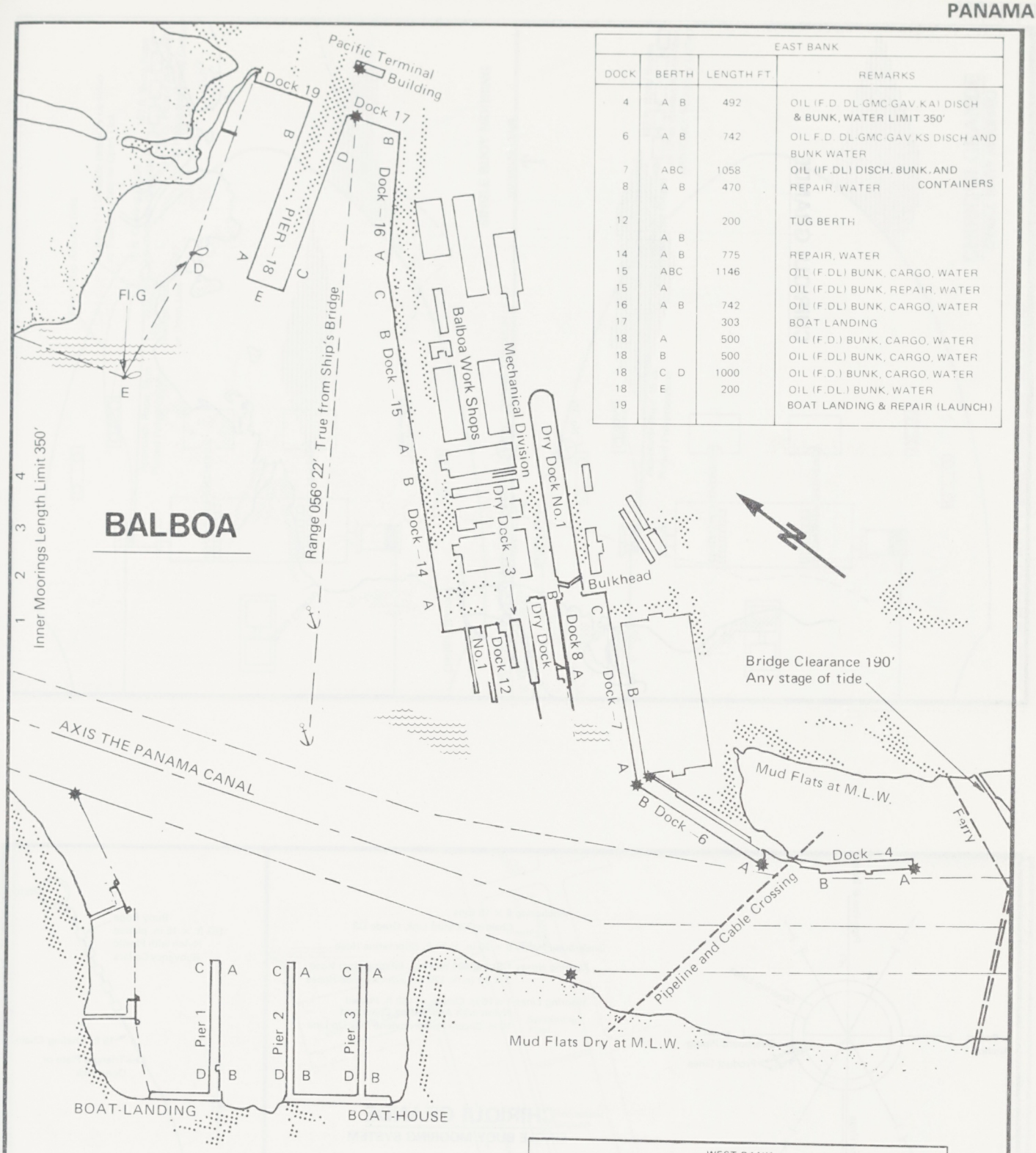

AGUADULCE
Storage Tank
Transport Belt
Pivot
Bollard
JB11
Loading Arm
Radical Track
BH5
Dolphin
Bollard
JB9
Dolphin
Automatic Feed Head
To Manoeuvring Dock
Molasses Storage Tank
BH12
Gulf Station
Bollard
Proposed Dredged Depth 3.5 m.
Port of Aguadulce
Existing Quay
70 m.
Existing Bank which will have to be cut back to improve entry to the Dock as may be necessary
To the Sea


ALMIRANTE
N
Mobile Banana Transporter
16.5m
9.1m
7.1m
+3.3m C.D.
Approx. level of Marine Bottom
Average Low Tide
Hydrographic Data
7.0m C.D.
TYPICAL TRANSVERSAL SECTION OF QUAY
Footbridge
Warehouse
Railway Access Pier
Platform for Small Boat Disembarkation
Approx. Alignment of Shore
Warehouse & Offices
106m
Loading Shed
16.5m
Mobile Banana Transporters
199m
PLAN OF QUAY



"Plan supplied by Ship's Master"





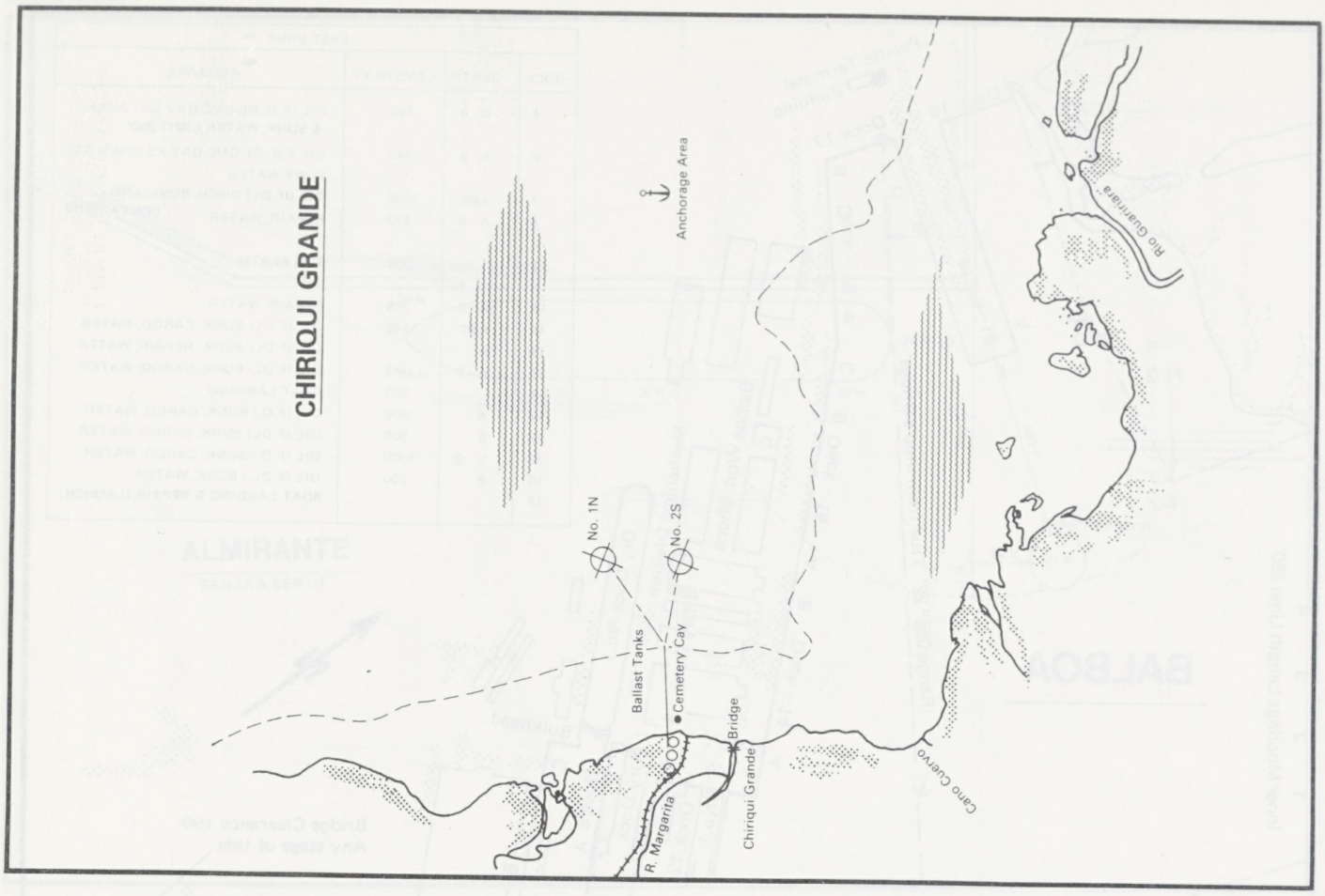
EAST BANK			
DOCK	BERTH	LENGTH FT.	REMARKS
4	A B	492	OIL (F.D. DL.GMC.GAV.KA) DISCH & BUNK, WATER LIMIT 350'
6	A B	742	OIL F.D. DL.GMC.GAV.KS DISCH AND BUNK WATER
7	ABC	1058	OIL (IF.DL) DISCH. BUNK. AND
8	A B	470	REPAIR, WATER CONTAINERS
12		200	TUG BERTH
	A B		
14	A B	775	REPAIR, WATER
15	ABC	1146	OIL (F.DL) BUNK, CARGO, WATER
15	A		OIL (F.DL) BUNK, REPAIR, WATER
16	A B	742	OIL (F.DL) BUNK, CARGO, WATER
17		303	BOAT LANDING
18	A	500	OIL (F.D.) BUNK, CARGO, WATER
18	B	500	OIL (F.DL) BUNK, CARGO, WATER
18	C D	1000	OIL (F.D.) BUNK, CARGO, WATER
18	E	200	OIL (F.DL.) BUNK, WATER
19			BOAT LANDING & REPAIR (LAUNCH)

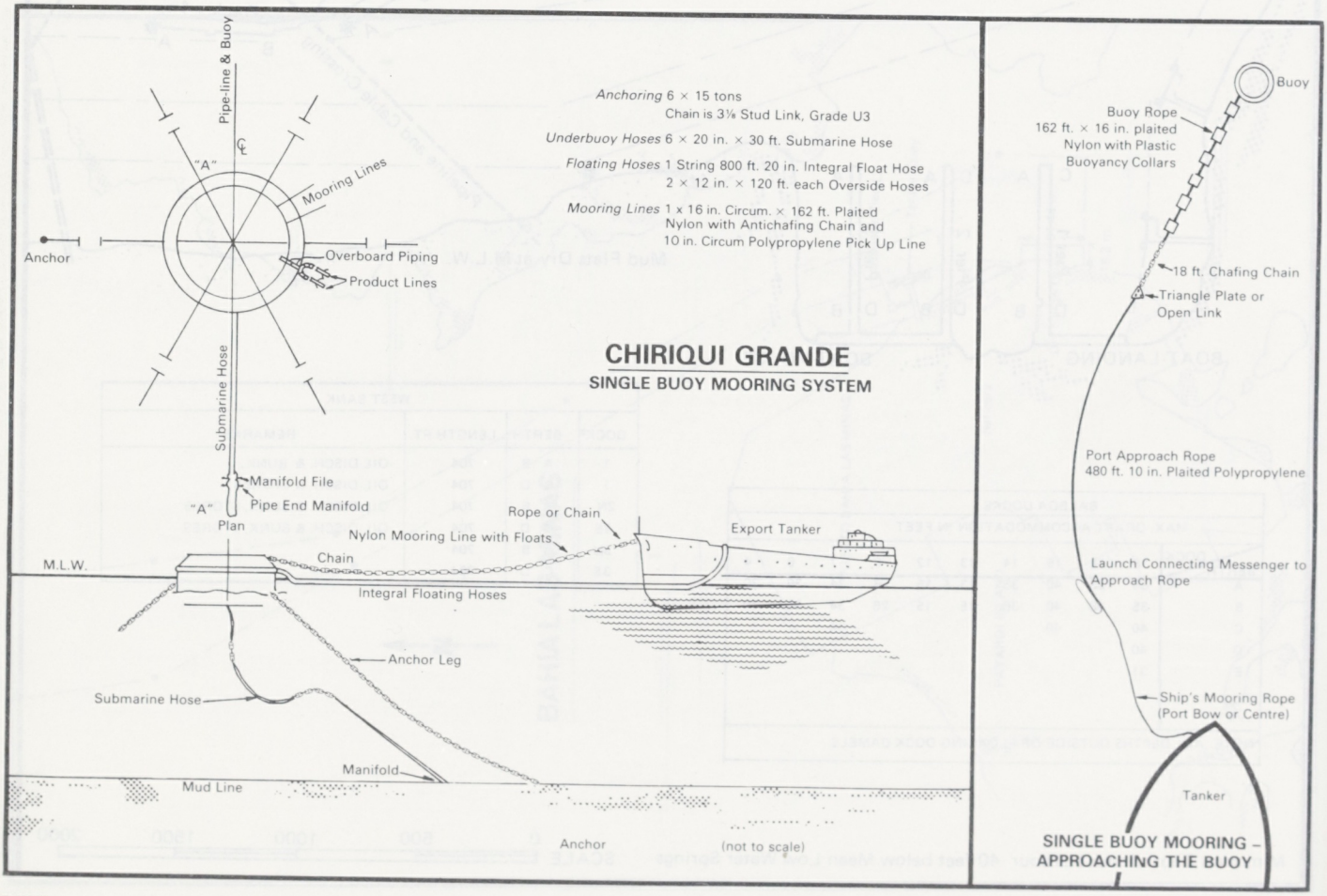
WEST BANK			
DOCK	BERTH	LENGTH FT.	REMARKS
1	A B	704	OIL-DISCH. & BUNK.
1	C D	704	OIL-DISCH. & STORES
2N	A B	704	OIL-DISCH. & BUNK, STORES
2S	C D	704	OIL-DISCH. & BUNK, STORES
3N	A B	704	
3S	C D	704	

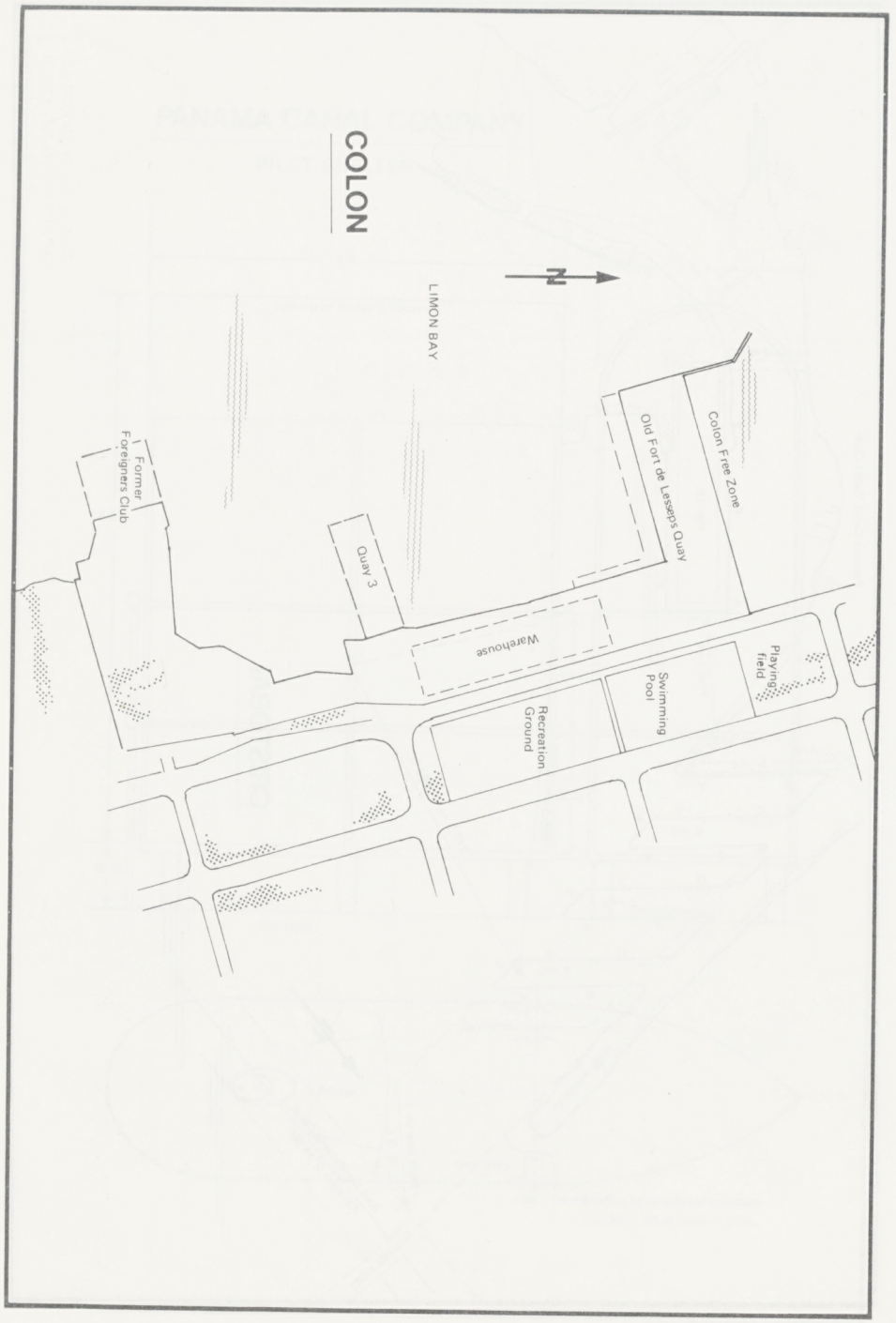
BALBOA DOCKS MAX. DRAFT ACCOMMODATION IN FEET										
DOCK / BERTH	18	16	15	14	13	12	8	7	6	4
A	39	38	40	36	13	15	26	34	36	30
B	35	38	40	36	15	15	26	34	36	30
C	40		40					34		
D	40									
E	31									
NOTE: ALL DEPTHS OUTSIDE OF FLOATING DOCK CAMELS										

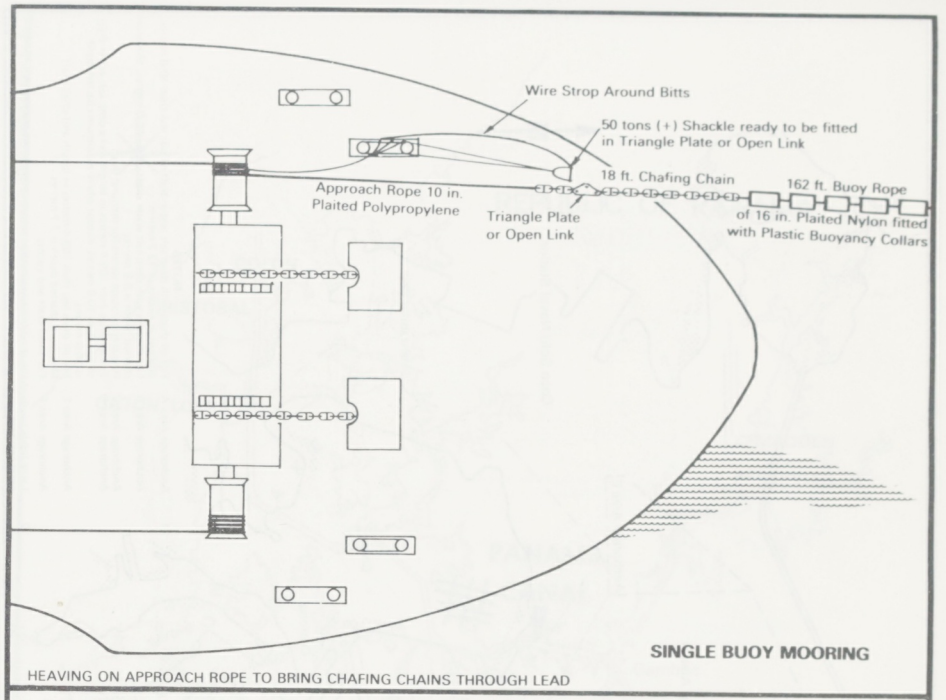
Minimum Depth Inner Harbour 40 feet below Mean Low Water Springs

SCALE 0 500 1000 1500 2000


CHIRIQUI GRANDE
Anchorage Area
Rio Guarnara
No. 1N
No. 2S
Ballast Tanks
Cemetery Cay
Bridge
Chiriqui Grande
R. Margarita
Cano Cuervo

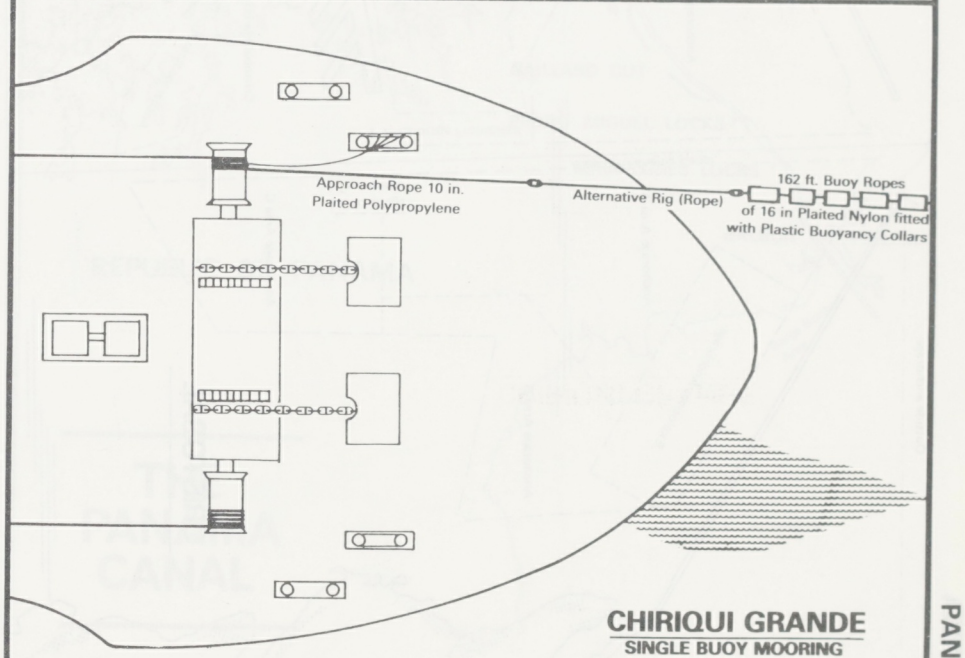

Pipe-line & Buoy
"A"
Mooring Lines
Anchor
Overboard Piping
Product Lines
Submarine Hose
Manifold File
"A"
Pipe End Manifold
Plan
Anchoring 6 × 15 tons
Chain is 3⅛ Stud Link, Grade U3
Underbuoy Hoses 6 × 20 in. × 30 ft. Submarine Hose
Floating Hoses 1 String 800 ft. 20 in. Integral Float Hose
2 × 12 in. × 120 ft. each Overside Hoses
Mooring Lines 1 x 16 in. Circum. × 162 ft. Plaited
Nylon with Antichafing Chain and
10 in. Circum Polypropylene Pick Up Line
CHIRIQUI GRANDE
SINGLE BUOY MOORING SYSTEM
Rope or Chain
Export Tanker
Nylon Mooring Line with Floats
M.L.W.
Chain
Integral Floating Hoses
Anchor Leg
Submarine Hose
Manifold
Mud Line
Anchor
(not to scale)
Buoy
Buoy Rope
162 ft. × 16 in. plaited
Nylon with Plastic
Buoyancy Collars
18 ft. Chafing Chain
Triangle Plate or
Open Link
Port Approach Rope
480 ft. 10 in. Plaited Polypropylene
Launch Connecting Messenger to
Approach Rope
Ship's Mooring Rope
(Port Bow or Centre)
Tanker
SINGLE BUOY MOORING –
APPROACHING THE BUOY





SINGLE BUOY MOORING

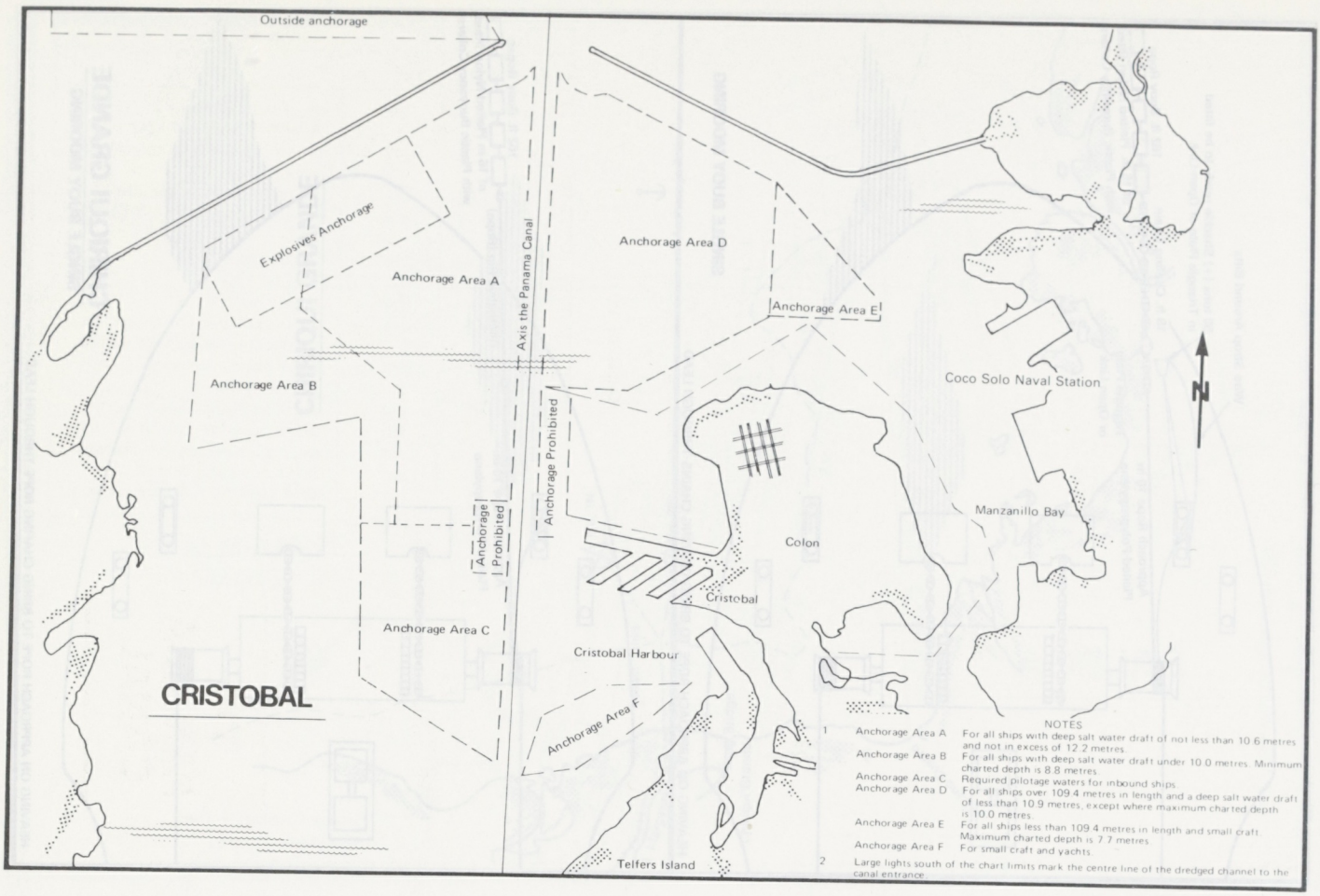
HEAVING ON APPROACH ROPE TO BRING CHAFING CHAINS THROUGH LEAD

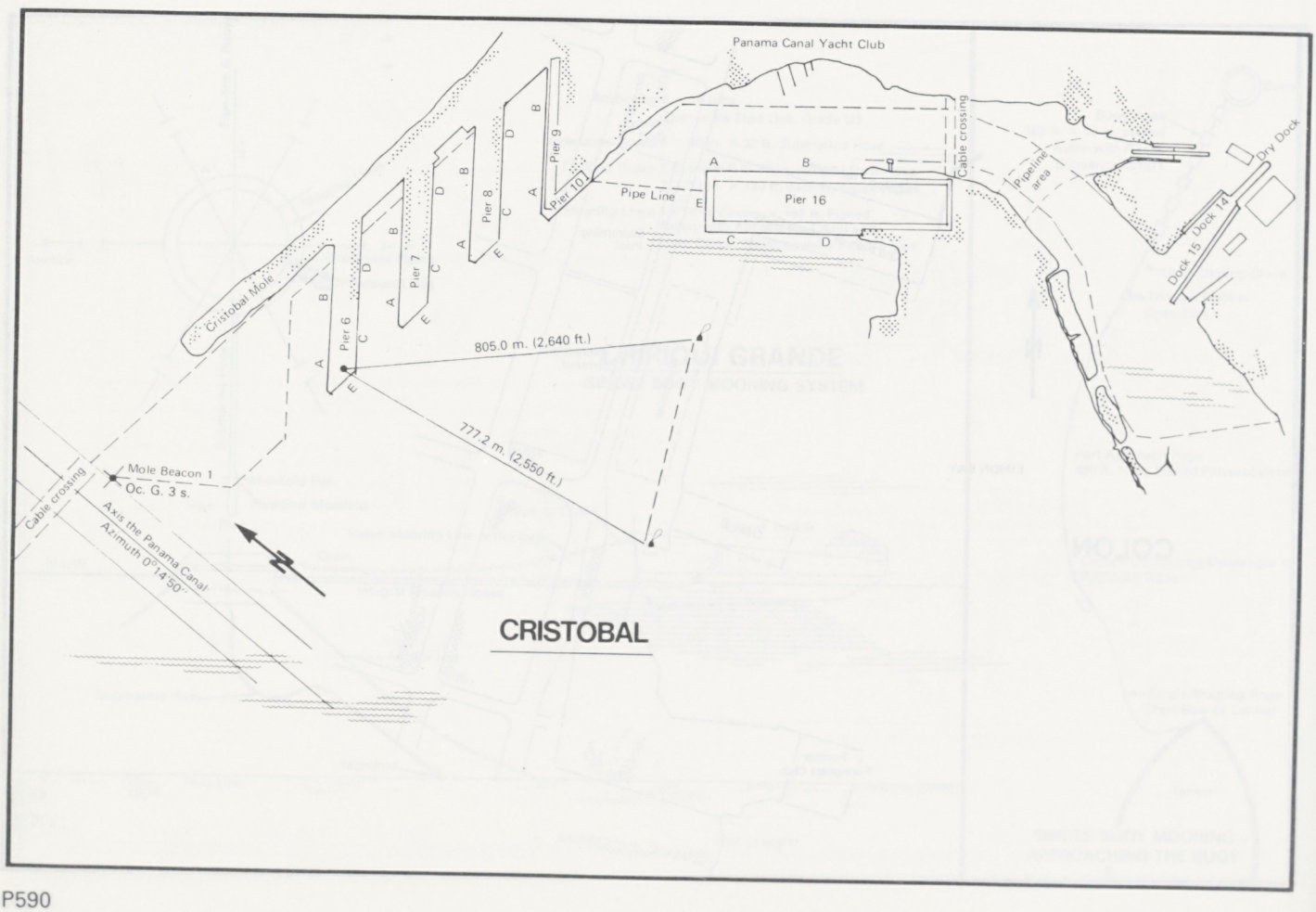


CHIRIQUI GRANDE

SINGLE BUOY MOORING

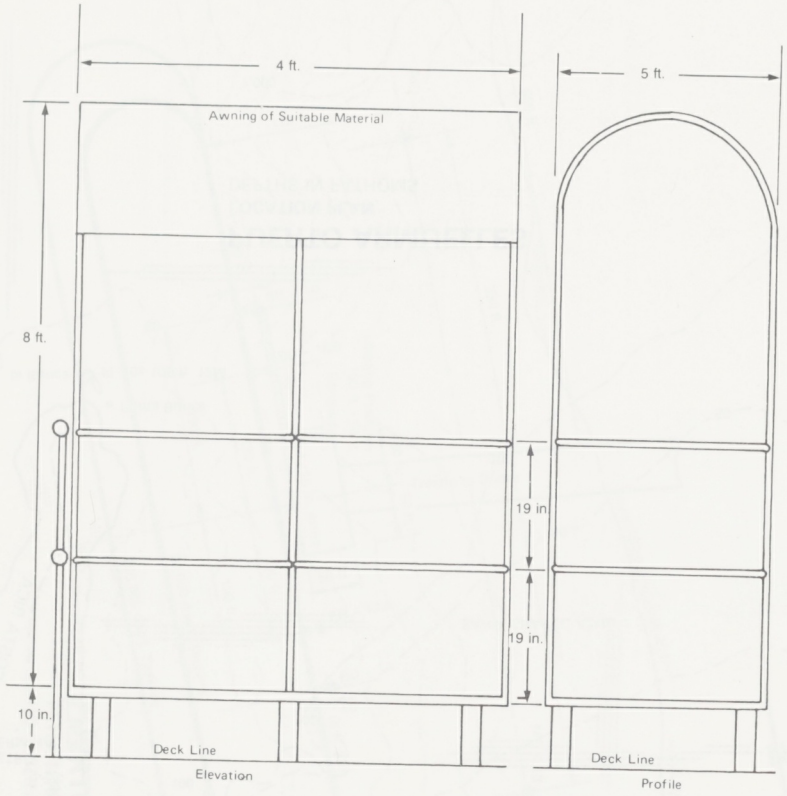
HEAVING ON APPROACH ROPE TO BRING CHAFING ROPE THROUGH LEAD

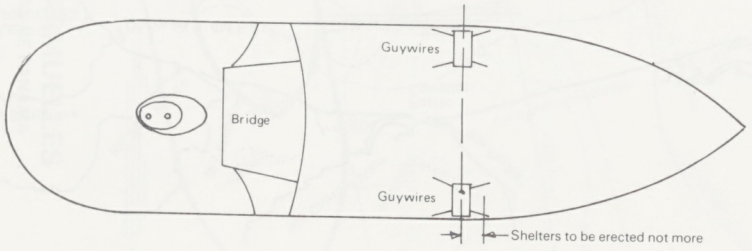

Outside anchorage
Explosives Anchorage
Anchorage Area A
Anchorage Area B
Axis the Panama Canal
Anchorage Area D
Anchorage Area E
Coco Solo Naval Station
N
Anchorage Prohibited
Anchorage Prohibited
Manzanillo Bay
Colon
Cristobal
Anchorage Area C
Cristobal Harbour
CRISTOBAL
Anchorage Area F
Telfers Island
NOTES
1 Anchorage Area A For all ships with deep salt water draft of not less than 10.6 metres and not in excess of 12.2 metres.
Anchorage Area B For all ships with deep salt water draft under 10.0 metres. Minimum charted depth is 8.8 metres.
Anchorage Area C Required pilotage waters for inbound ships.
Anchorage Area D For all ships over 109.4 metres in length and a deep salt water draft of less than 10.9 metres, except where maximum charted depth is 10.0 metres.
Anchorage Area E For all ships less than 109.4 metres in length and small craft. Maximum charted depth is 7.7 metres.
Anchorage Area F For small craft and yachts.
2 Large lights south of the chart limits mark the centre line of the dredged channel to the canal entrance.


Panama Canal Yacht Club
Cable crossing
Pipeline area
Dry Dock
Dock 15
Dock 14
Pier 16
Pipe Line
Pier 10
Pier 9
Pier 8
Pier 7
Pier 6
Cristobal Mole
805.0 m. (2,640 ft.)
777.2 m. (2,550 ft.)
Mole Beacon 1
Oc. G. 3 s.
Cable crossing
Axis the Panama Canal
Azimuth 0°14'50"
CRISTOBAL

PANAMA CANAL COMPANY

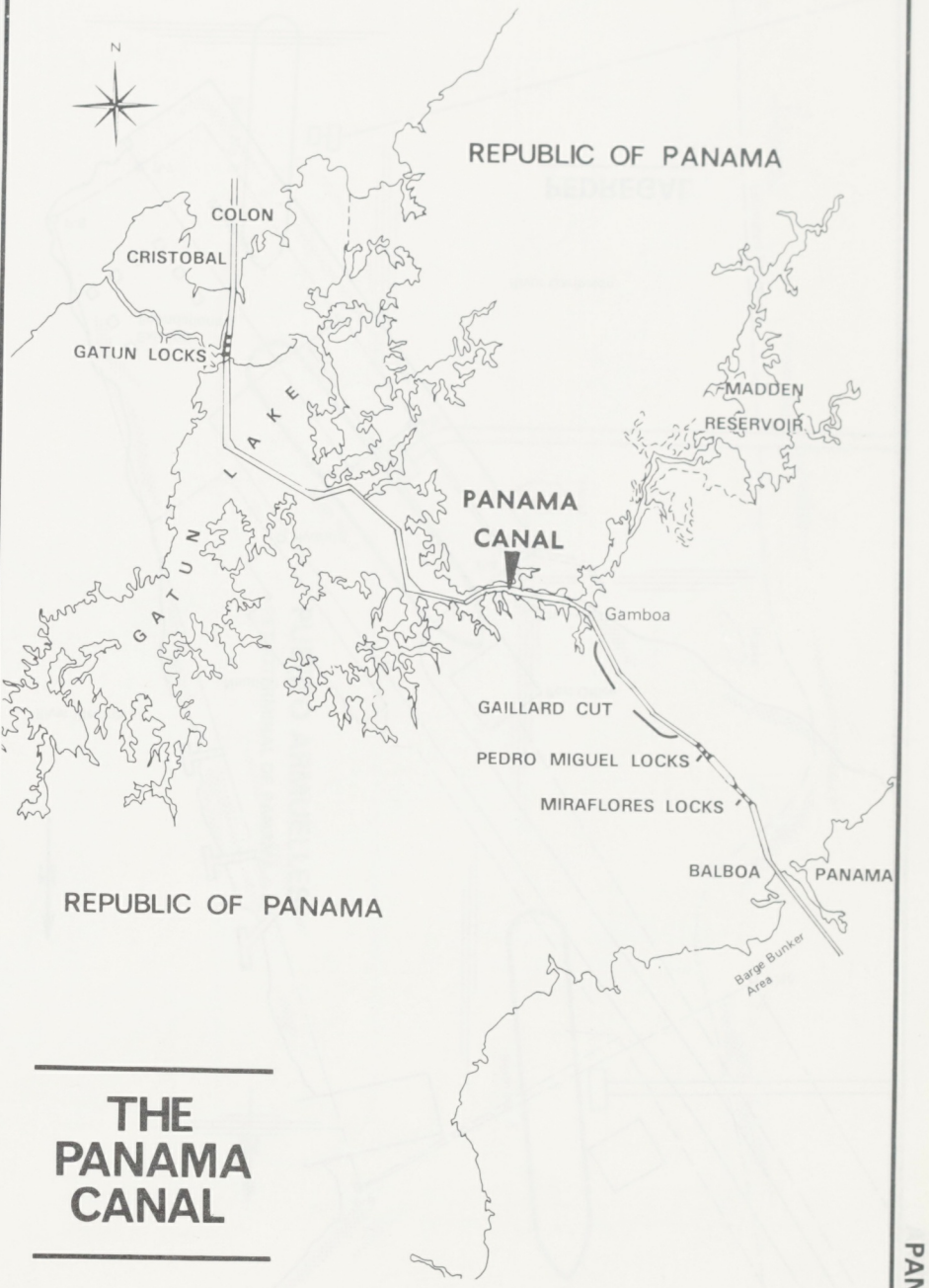
PILOT SHELTER





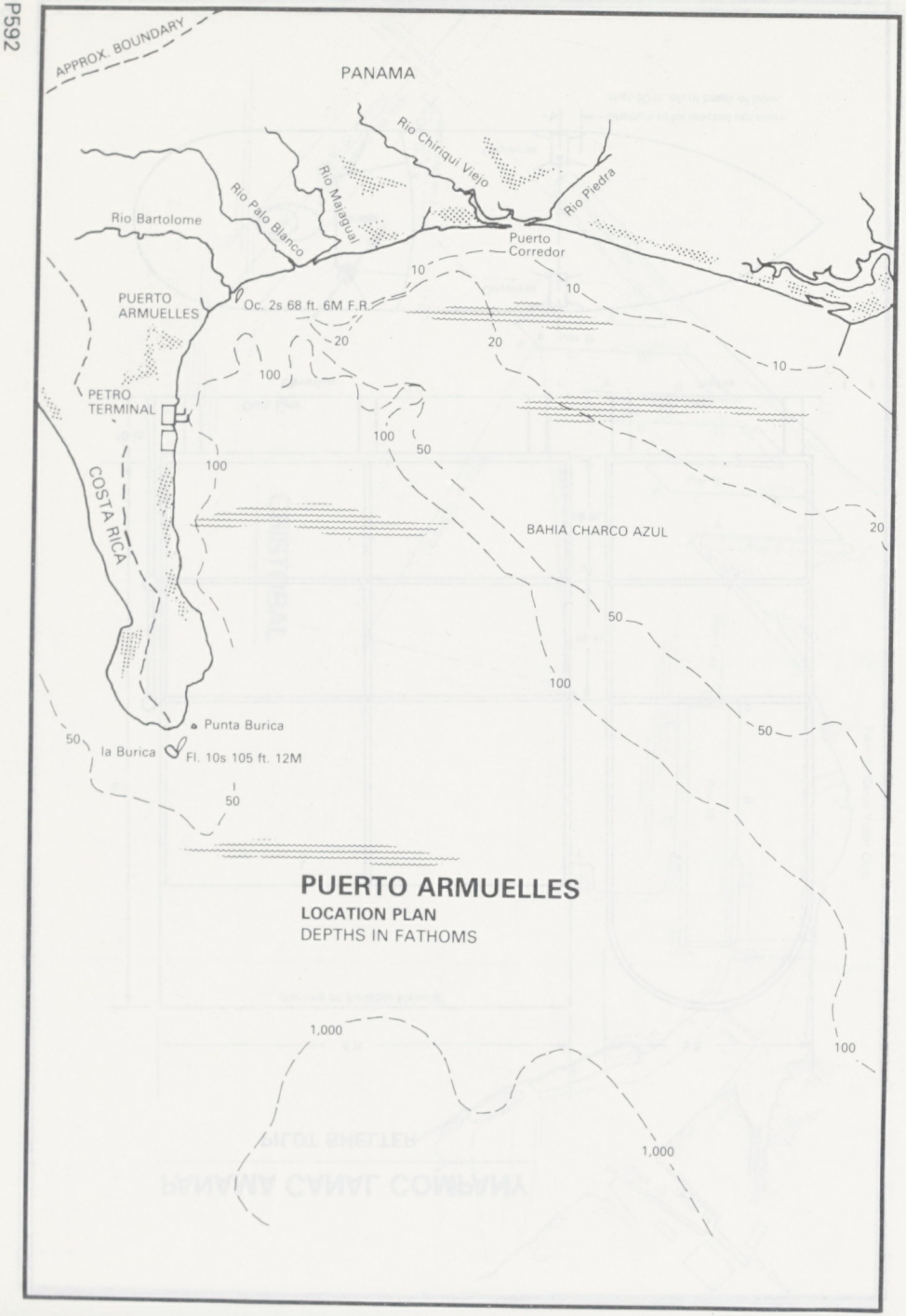
Shelters to be erected not more than 50 ft. aft of break of bow.

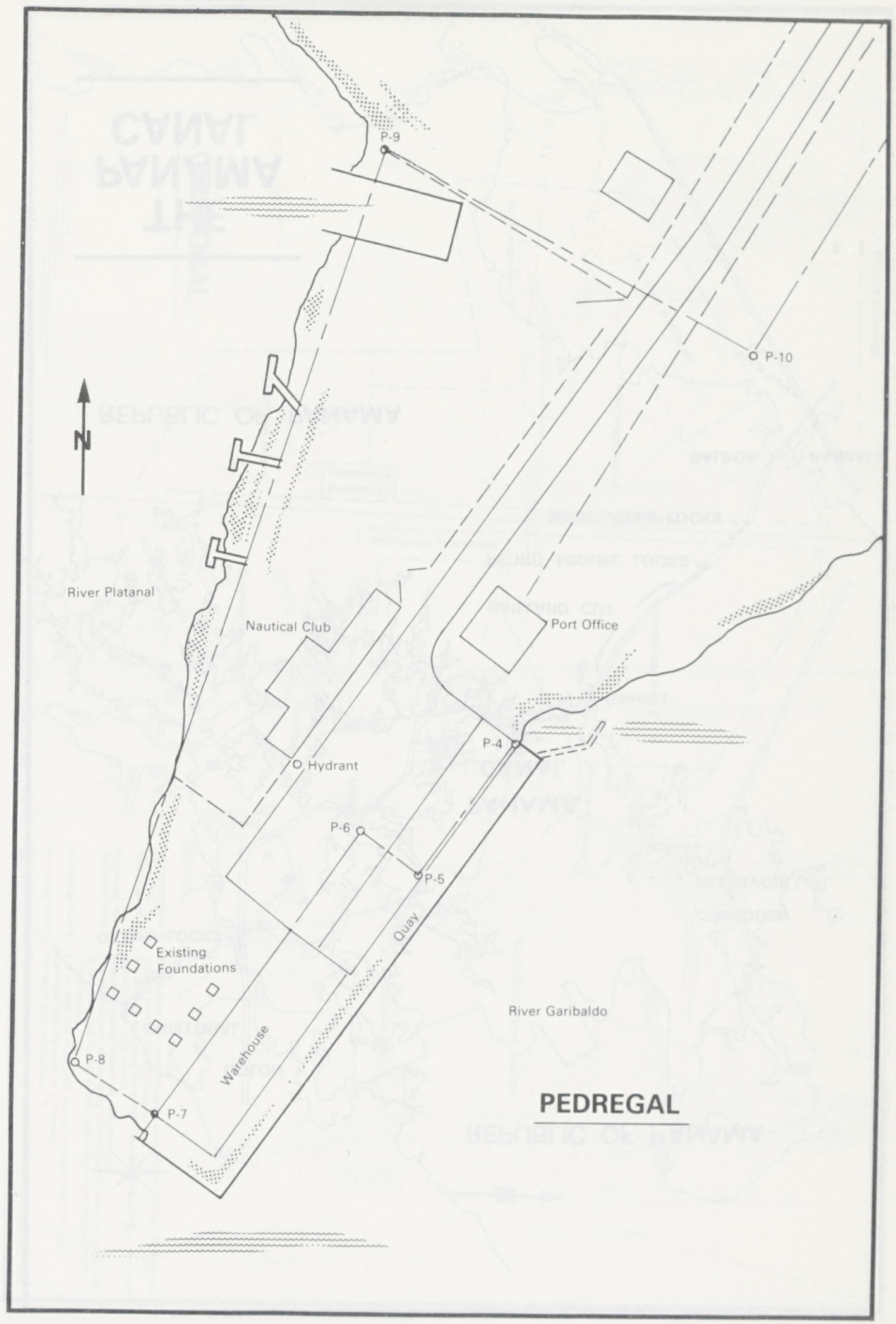
P591

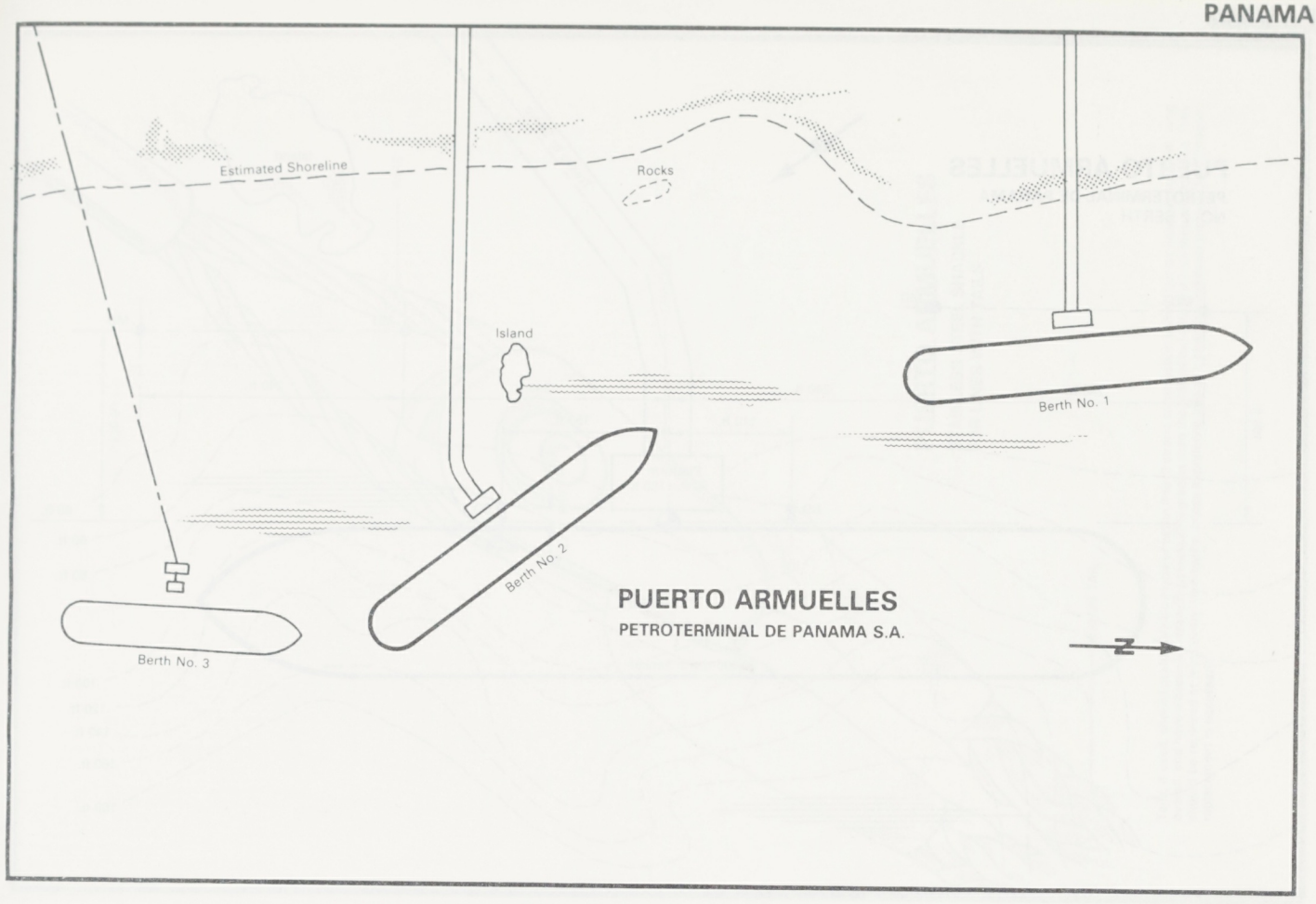


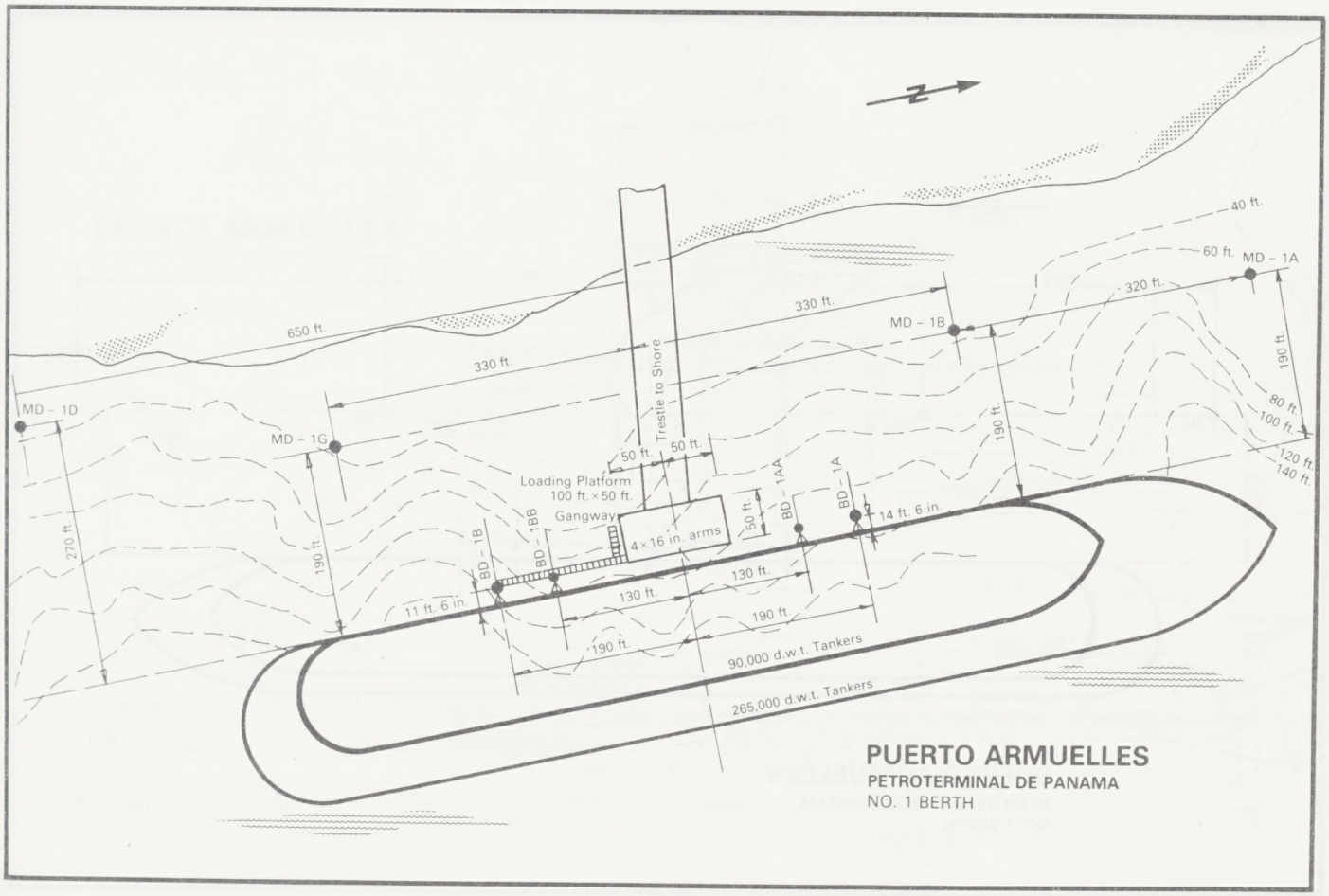
THE PANAMA CANAL

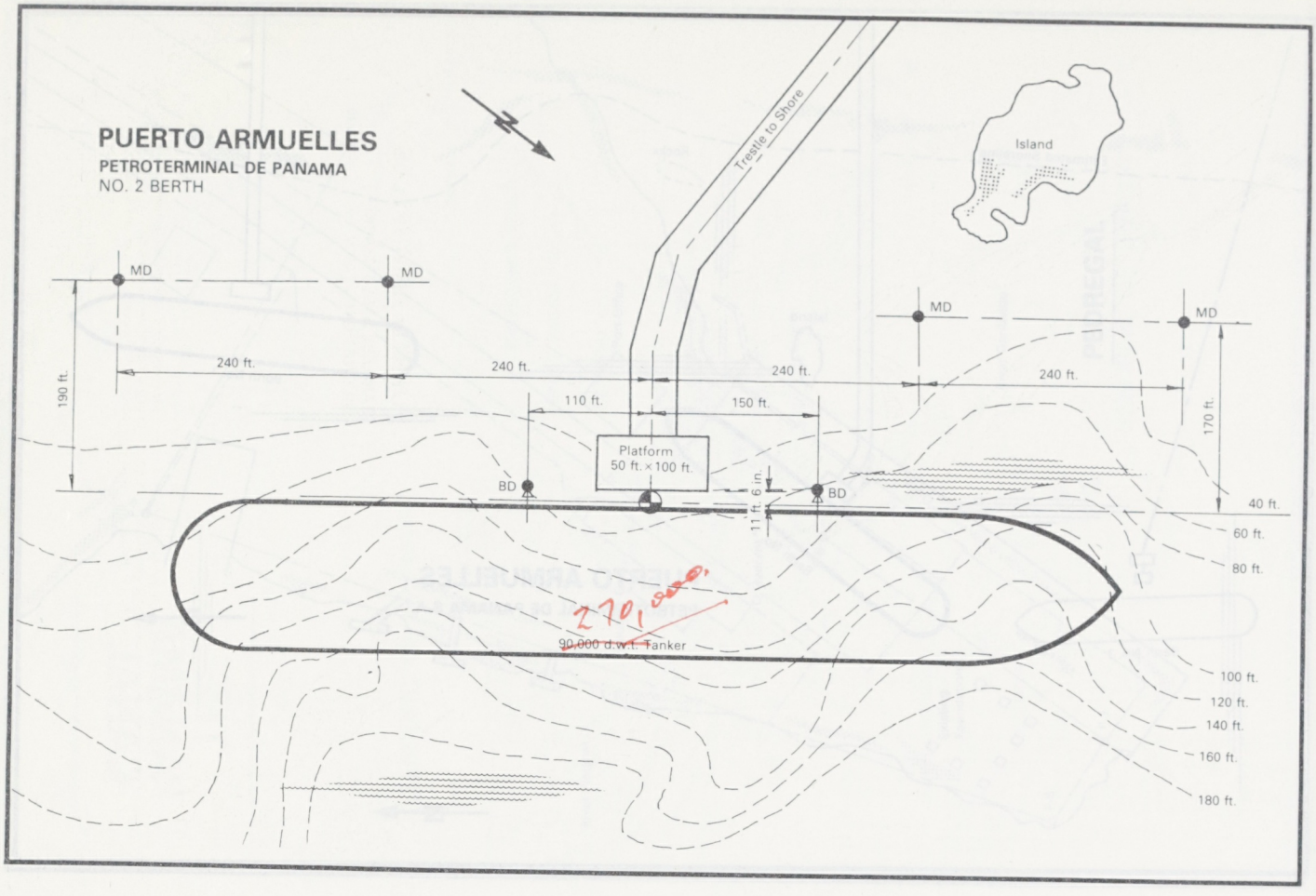
PANAMA

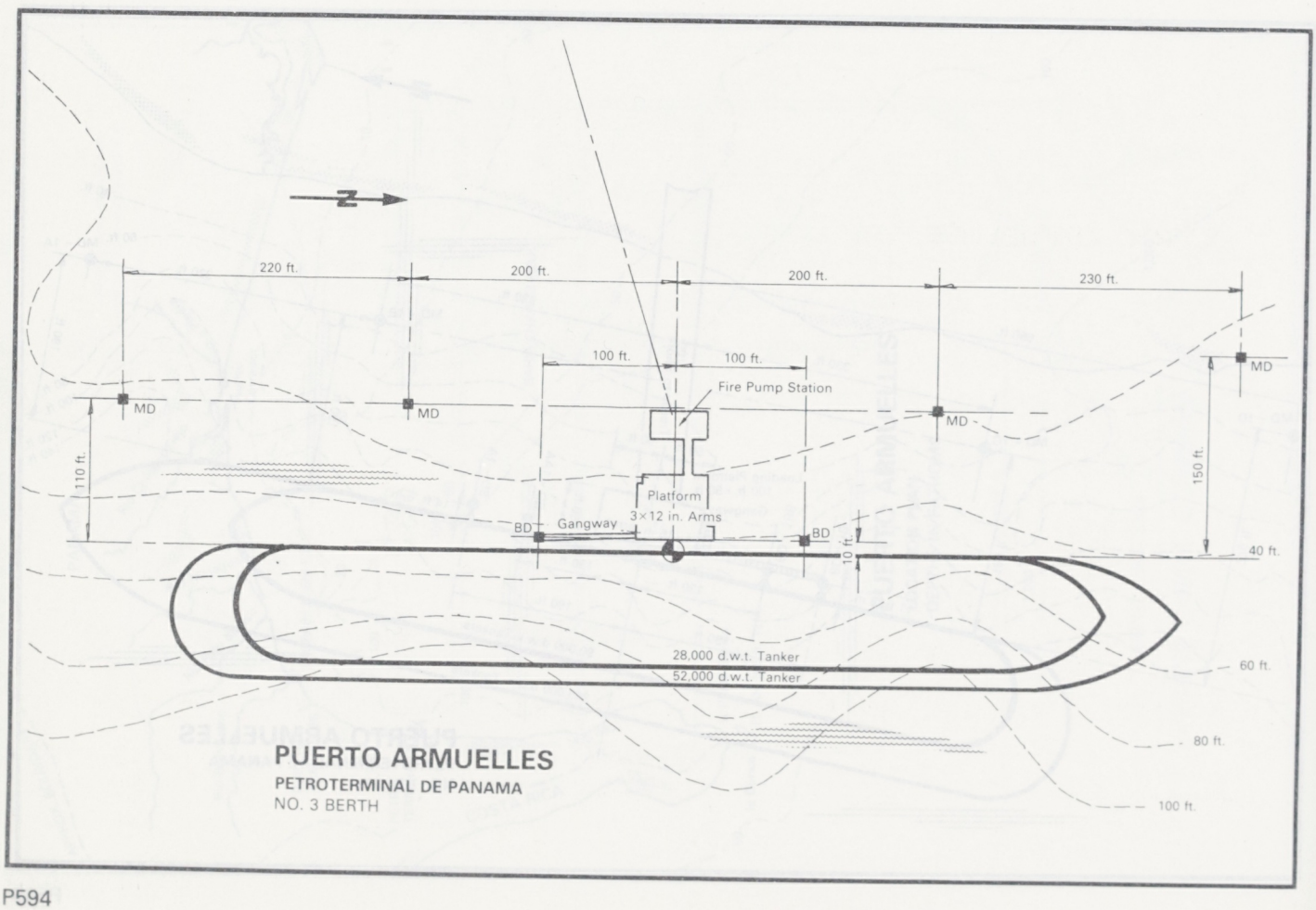

APPROX. BOUNDARY
PANAMA
Rio Chiriqui Viejo
Rio Piedra
Rio Palo Blanco
Rio Majagual
Rio Bartolome
Puerto Corredor
PUERTO ARMUELLES
Oc. 2s 68 ft. 6M F.R.
PETRO TERMINAL
COSTA RICA
BAHIA CHARCO AZUL
Punta Burica
Ia Burica
Fl. 10s 105 ft. 12M
10
20
50
100
1,000
PUERTO ARMUELLES
LOCATION PLAN
DEPTHS IN FATHOMS

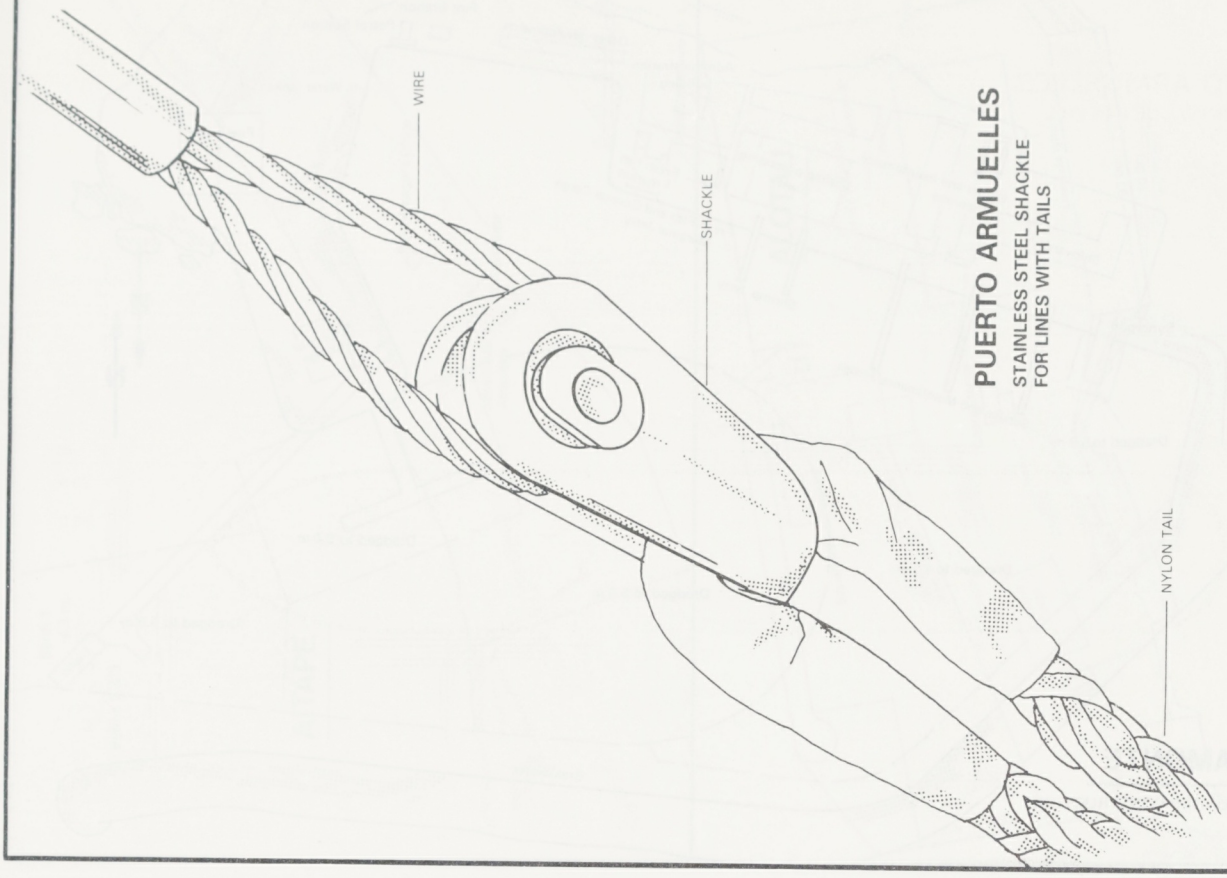

N
P-9
P-10
River Platanal
Nautical Club
Port Office
Hydrant
P-4
P-6
P-5
Existing Foundations
Quay
River Garibaldo
Warehouse
P-8
P-7
PEDREGAL


Estimated Shoreline
Rocks
Island
Berth No. 1
Berth No. 2
Berth No. 3
PUERTO ARMUELLES
PETROTERMINAL DE PANAMA S.A.
N


N
40 ft.
60 ft.
MD – 1A
320 ft.
330 ft.
MD – 1B
650 ft.
330 ft.
MD – 1D
MD – 1G
Trestle to Shore
50 ft.
50 ft.
Loading Platform
100 ft. × 50 ft.
Gangway
4 × 16 in. arms
190 ft.
190 ft.
80 ft.
100 ft.
120 ft.
140 ft.
270 ft.
190 ft.
50 ft.
BD – 1AA
BD – 1A
14 ft. 6 in.
BD – 1B
BD – 1BB
11 ft. 6 in.
130 ft.
130 ft.
190 ft.
190 ft.
90,000 d.w.t. Tankers
265,000 d.w.t. Tankers
PUERTO ARMUELLES
PETROTERMINAL DE PANAMA
NO. 1 BERTH


PUERTO ARMUELLES
PETROTERMINAL DE PANAMA
NO. 2 BERTH
N
Trestle to Shore
Island
MD
MD
MD
MD
240 ft.
240 ft.
240 ft.
240 ft.
190 ft.
170 ft.
110 ft.
150 ft.
Platform
50 ft. × 100 ft.
BD
BD
11 ft. 6 in.
40 ft.
60 ft.
80 ft.
270,000
90,000 d.w.t. Tanker
100 ft.
120 ft.
140 ft.
160 ft.
180 ft.


N
220 ft.
200 ft.
200 ft.
230 ft.
100 ft.
100 ft.
Fire Pump Station
MD
MD
MD
MD
110 ft.
150 ft.
Platform
3×12 in. Arms
Gangway
BD
BD
10 ft.
40 ft.
28,000 d.w.t. Tanker
52,000 d.w.t. Tanker
60 ft.
80 ft.
100 ft.
PUERTO ARMUELLES
PETROTERMINAL DE PANAMA
NO. 3 BERTH

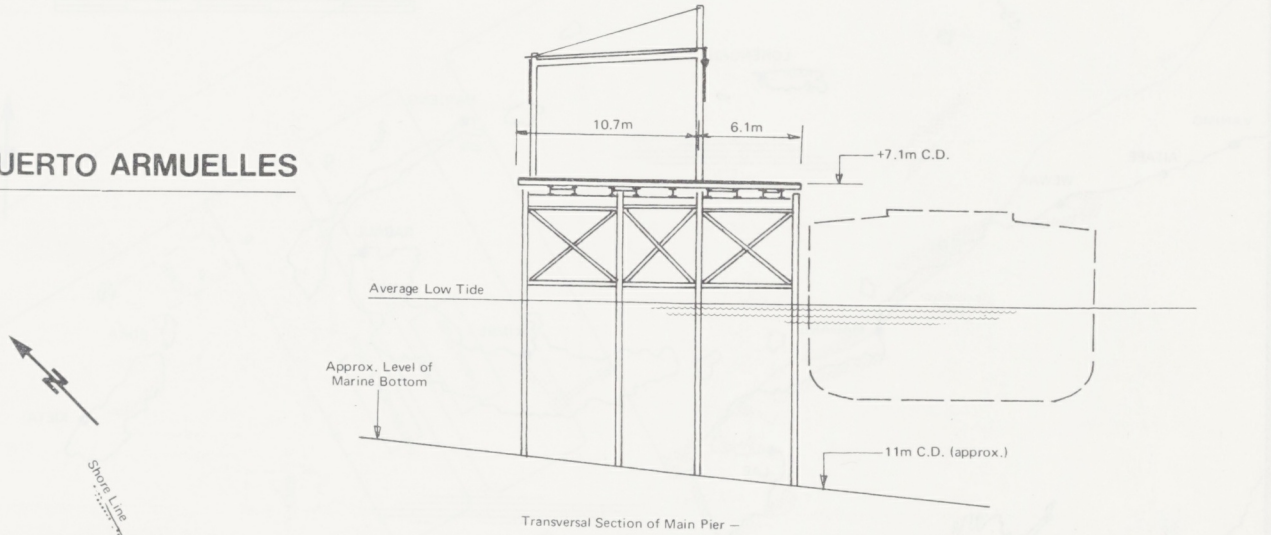


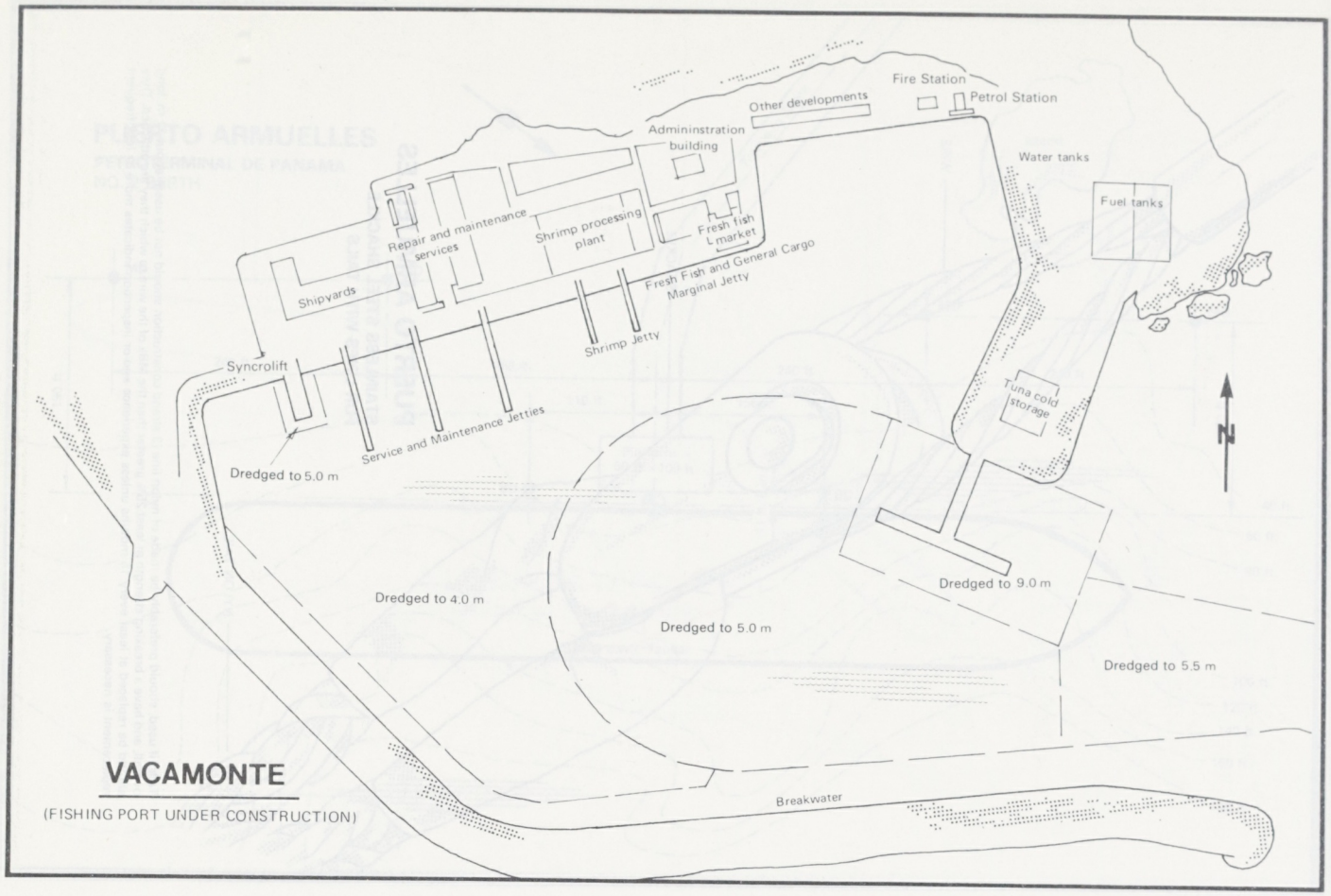
PUERTO ARMUELLES

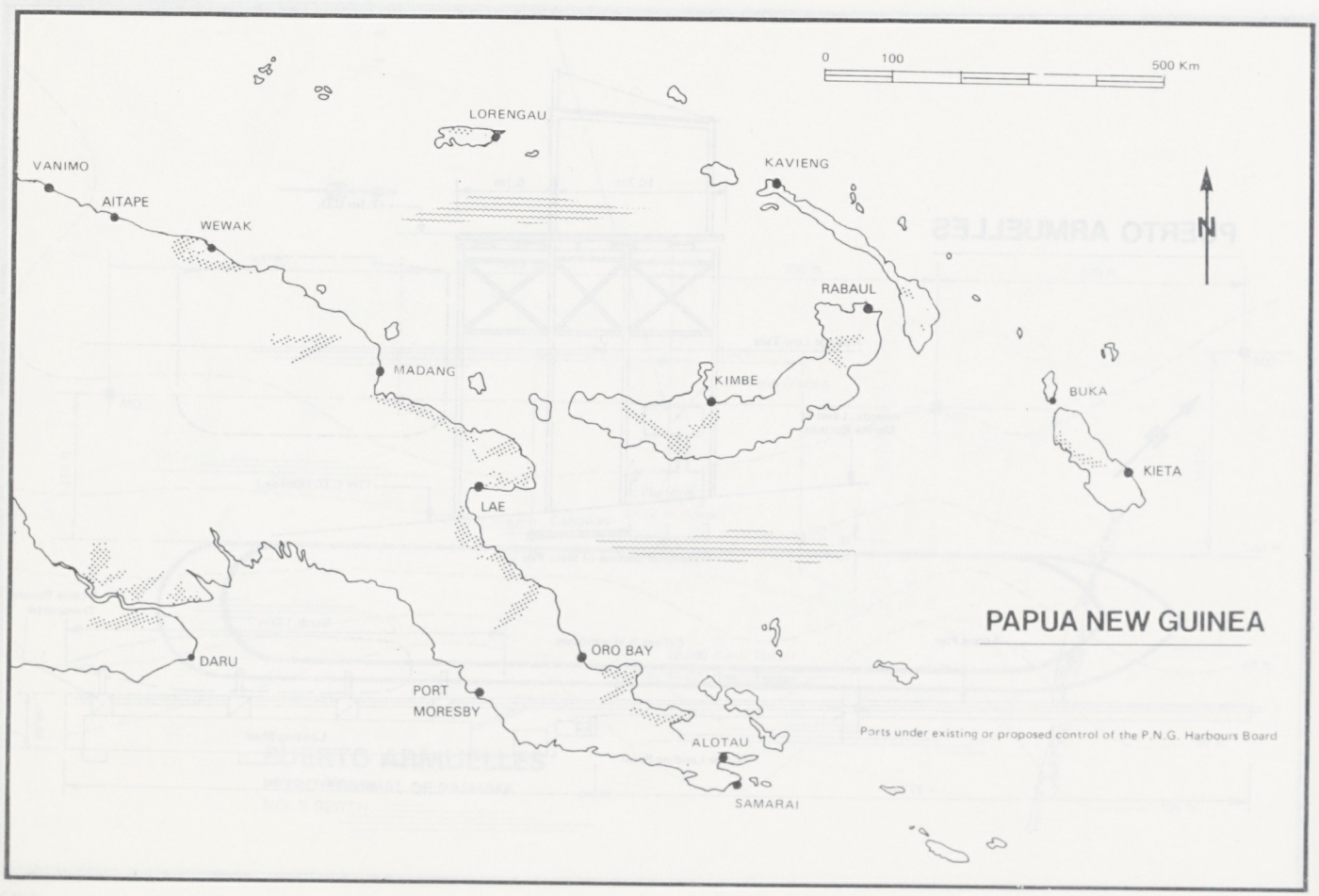
STAINLESS STEEL SHACKLE
FOR LINES WITH TAILS

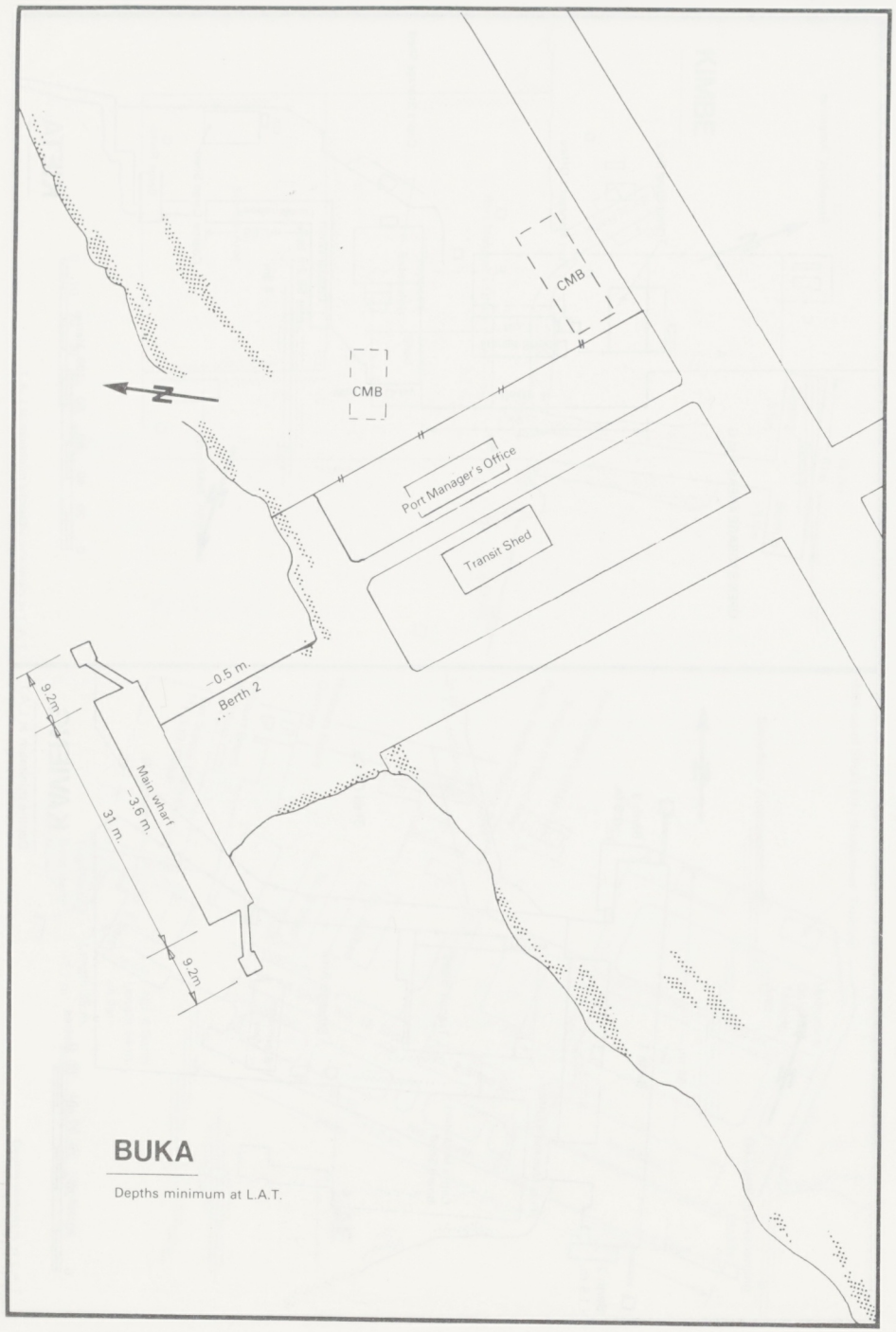
Tails, if used, should preferably be made of nylon line (3 strand construction should not be used) about 11 m. long overall, and have a breaking strength at least 25% greater than the MBL of the wire to which they are attached. They should be replaced at least every 18 months unless experience and/or inspection indicates more or less frequent replacement is necessary.

PUERTO ARMUELLES



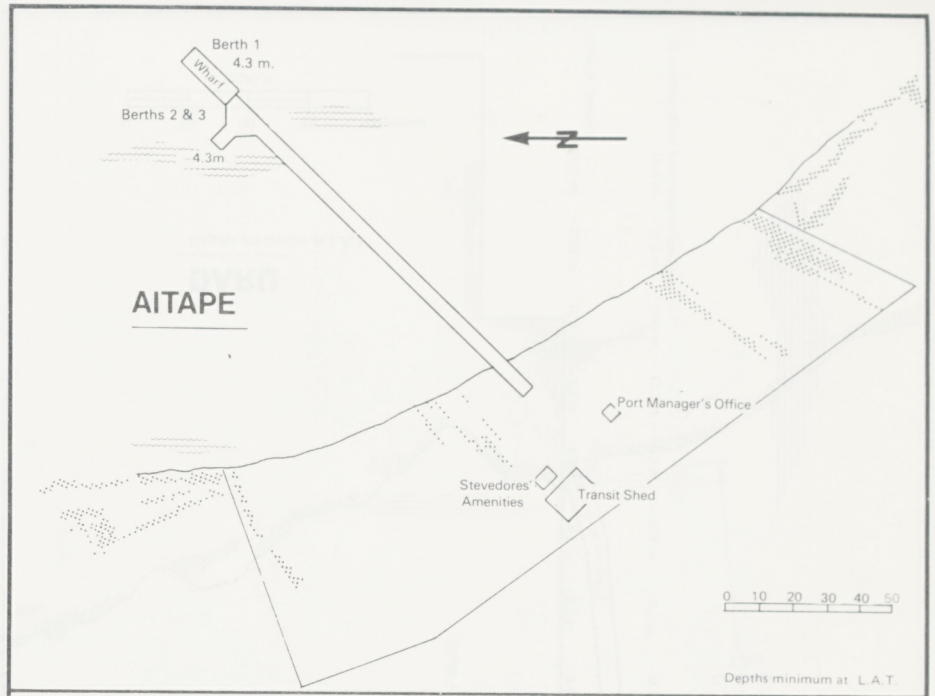

Fire Station
Other developments
Petrol Station
Adminstration building
Water tanks
Fuel tanks
Repair and maintenance services
Shrimp processing plant
Fresh fish L market
Shipyards
Fresh Fish and General Cargo Marginal Jetty
Shrimp Jetty
Syncrolift
Tuna cold storage
Service and Maintenance Jetties
Dredged to 5.0 m
N
Dredged to 9.0 m
Dredged to 4.0 m
Dredged to 5.0 m
Dredged to 5.5 m
VACAMONTE
(FISHING PORT UNDER CONSTRUCTION)
Breakwater


0
100
500 Km
LORENGAU
VANIMO
KAVIENG
AITAPE
WEWAK
N
RABAUL
MADANG
KIMBE
BUKA
KIETA
LAE
PAPUA NEW GUINEA
DARU
ORO BAY
PORT MORESBY
ALOTAU
SAMARAI
Ports under existing or proposed control of the P.N.G. Harbours Board



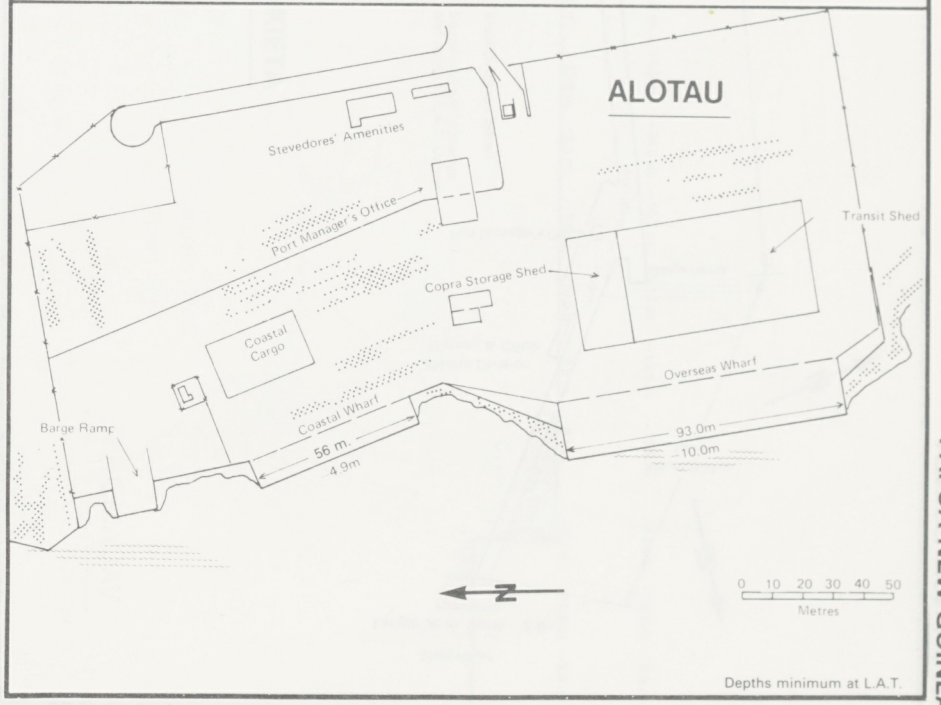
BUKA

Depths minimum at L.A.T.



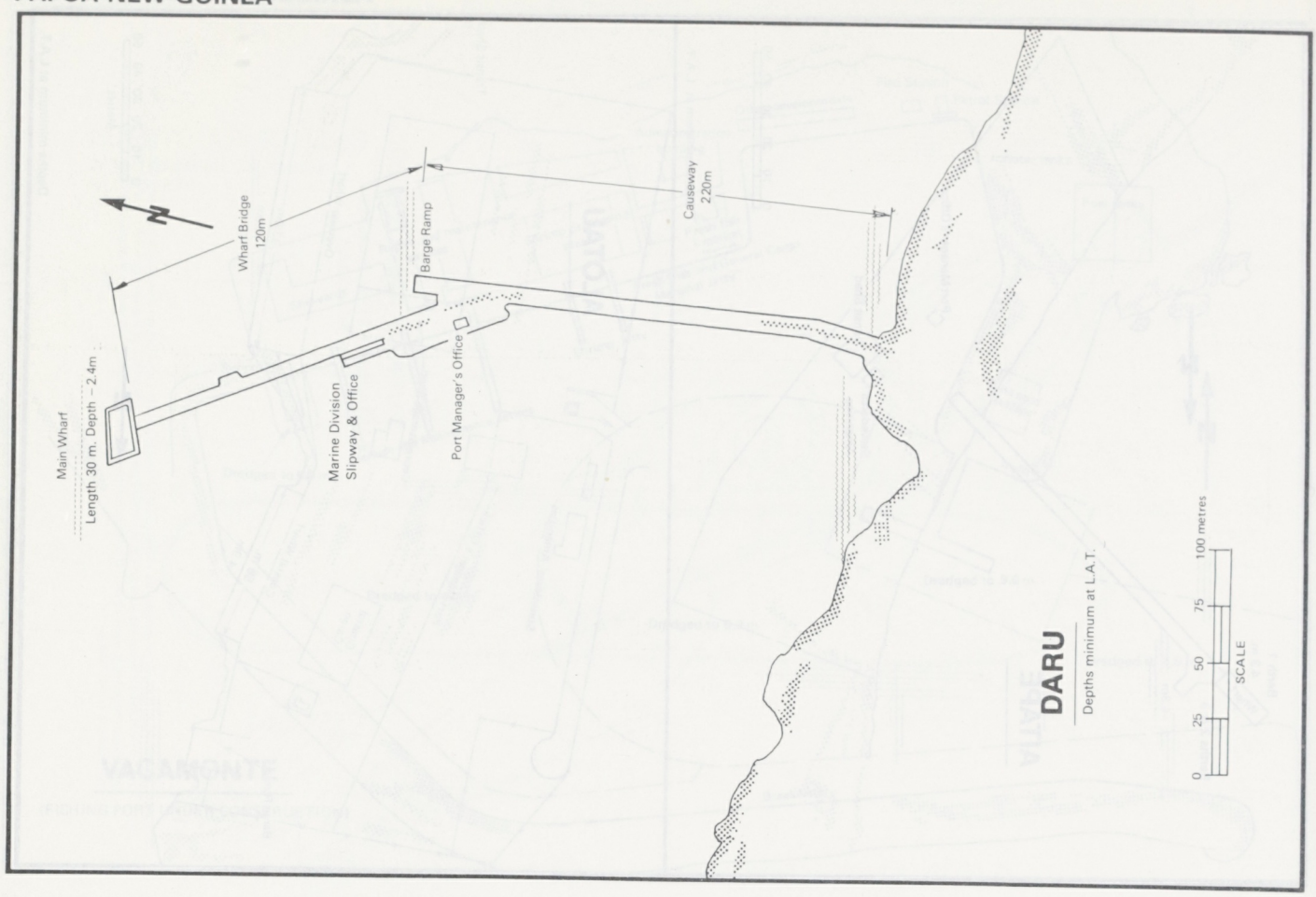
AITAPE

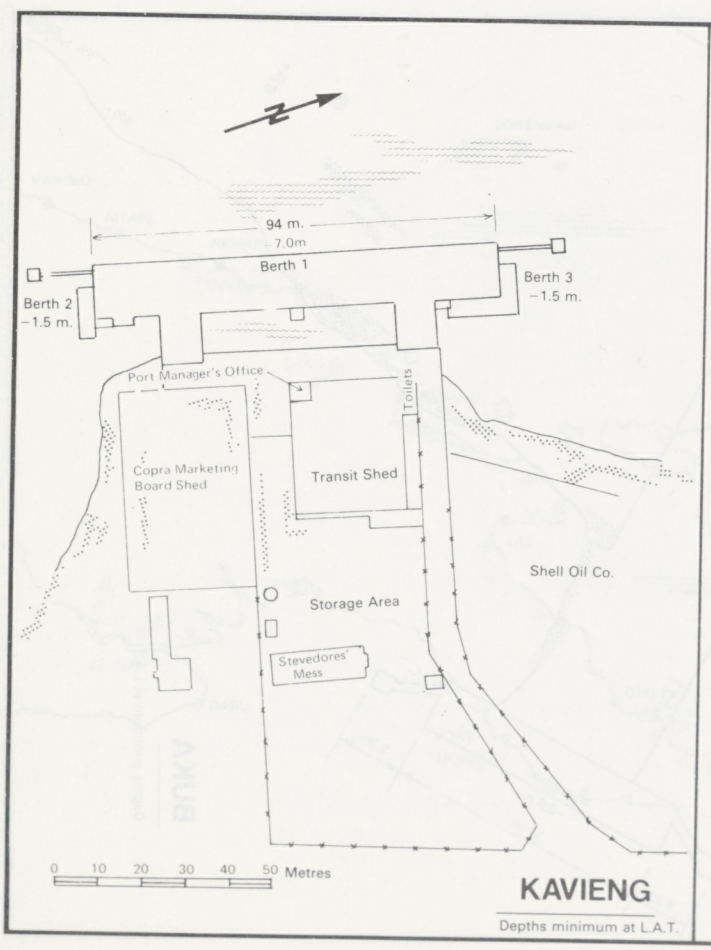
Depths minimum at L.A.T.

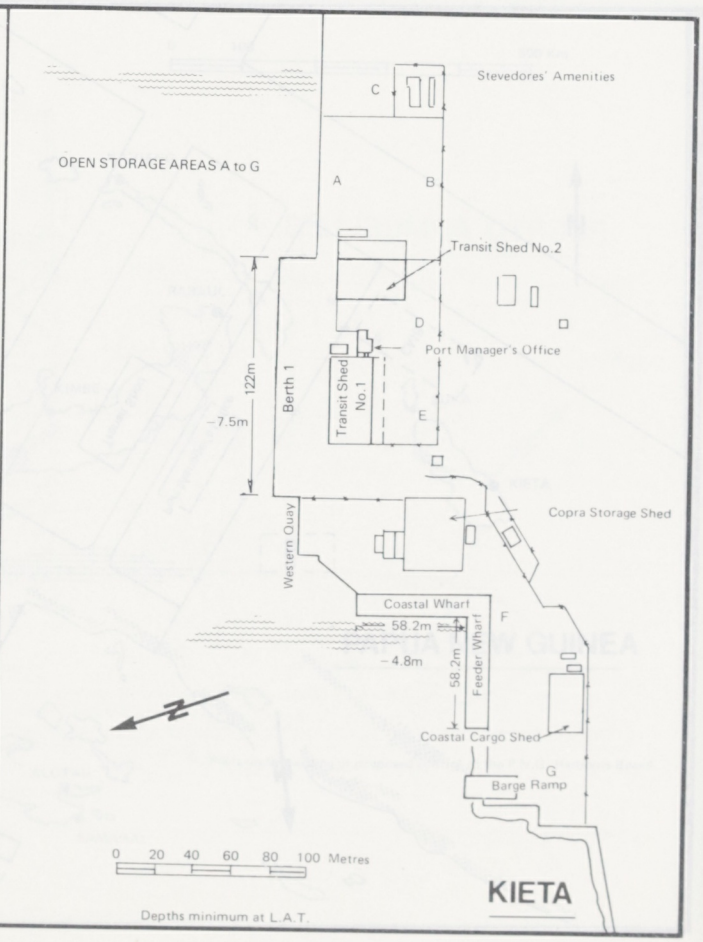


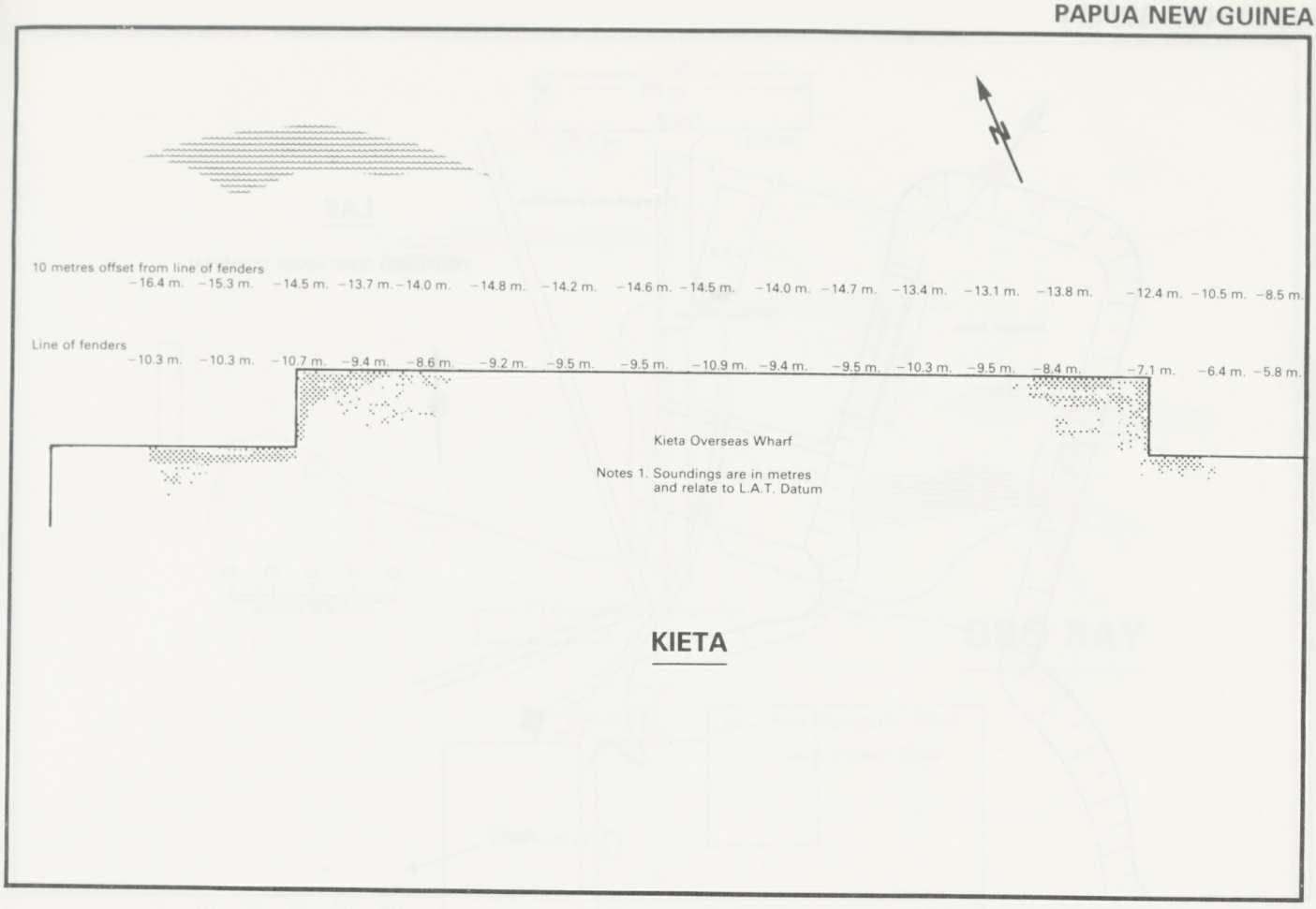
ALOTAU

Depths minimum at L.A.T.

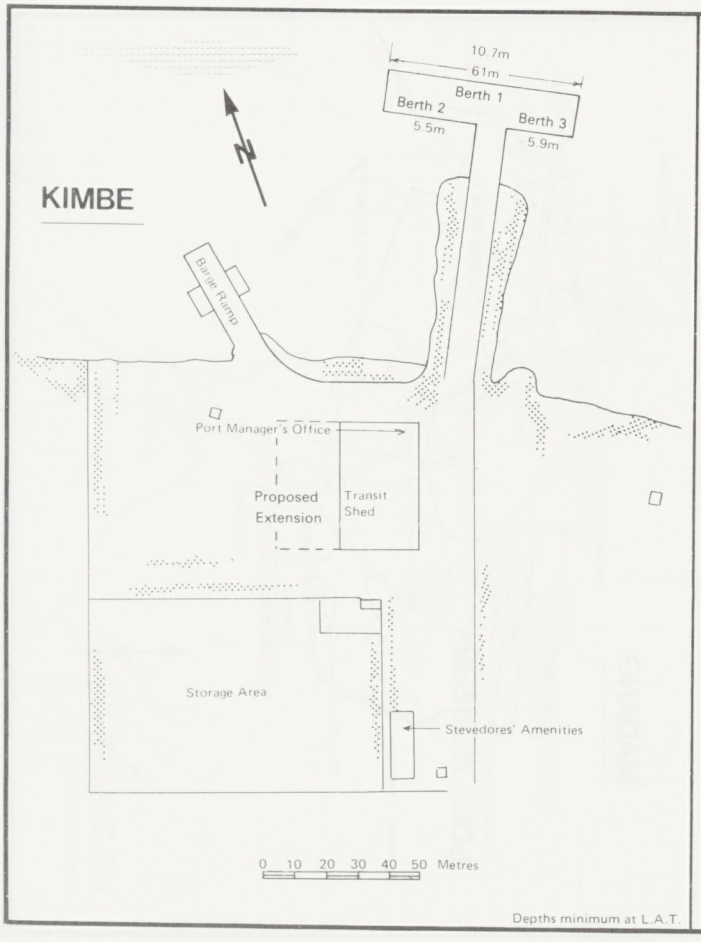

Wharf Bridge
120m
Barge Ramp
Causeway
220m
Main Wharf
Length 30 m. Depth – 2.4m
Marine Division
Slipway & Office
Port Manager's Office
DARU
Depths minimum at L.A.T.
0
25
50
75
100 metres
SCALE

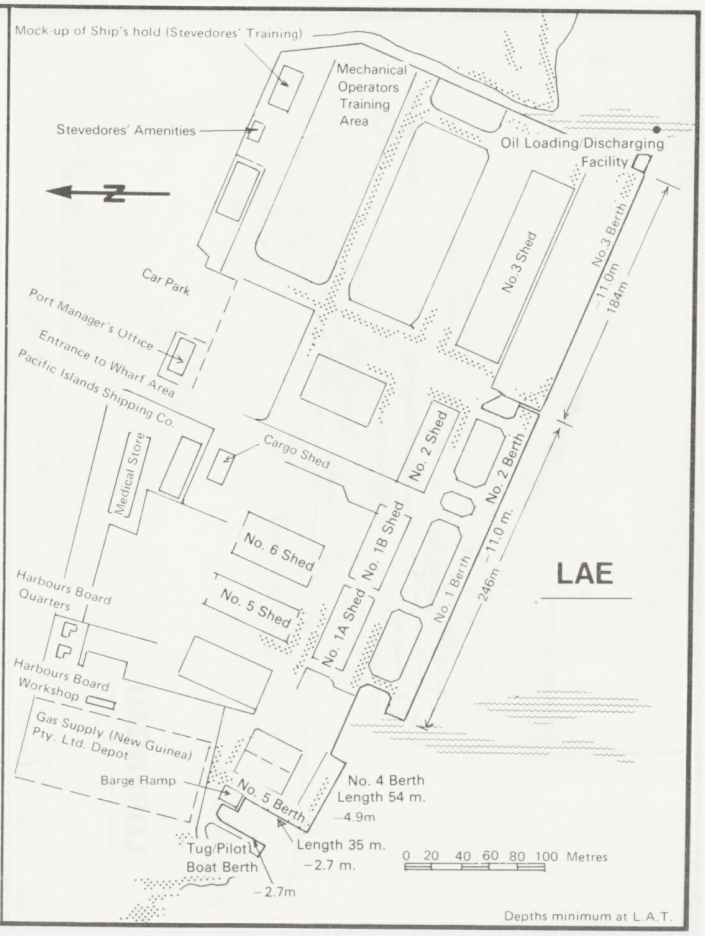

94 m.
7.0m
Berth 1
Berth 2
– 1.5 m.
Berth 3
– 1.5 m.
Port Manager's Office
Toilets
Copra Marketing
Board Shed
Transit Shed
Storage Area
Shell Oil Co.
Stevedores'
Mess
0
10
20
30
40
50 Metres
KAVIENG
Depths minimum at L.A.T.

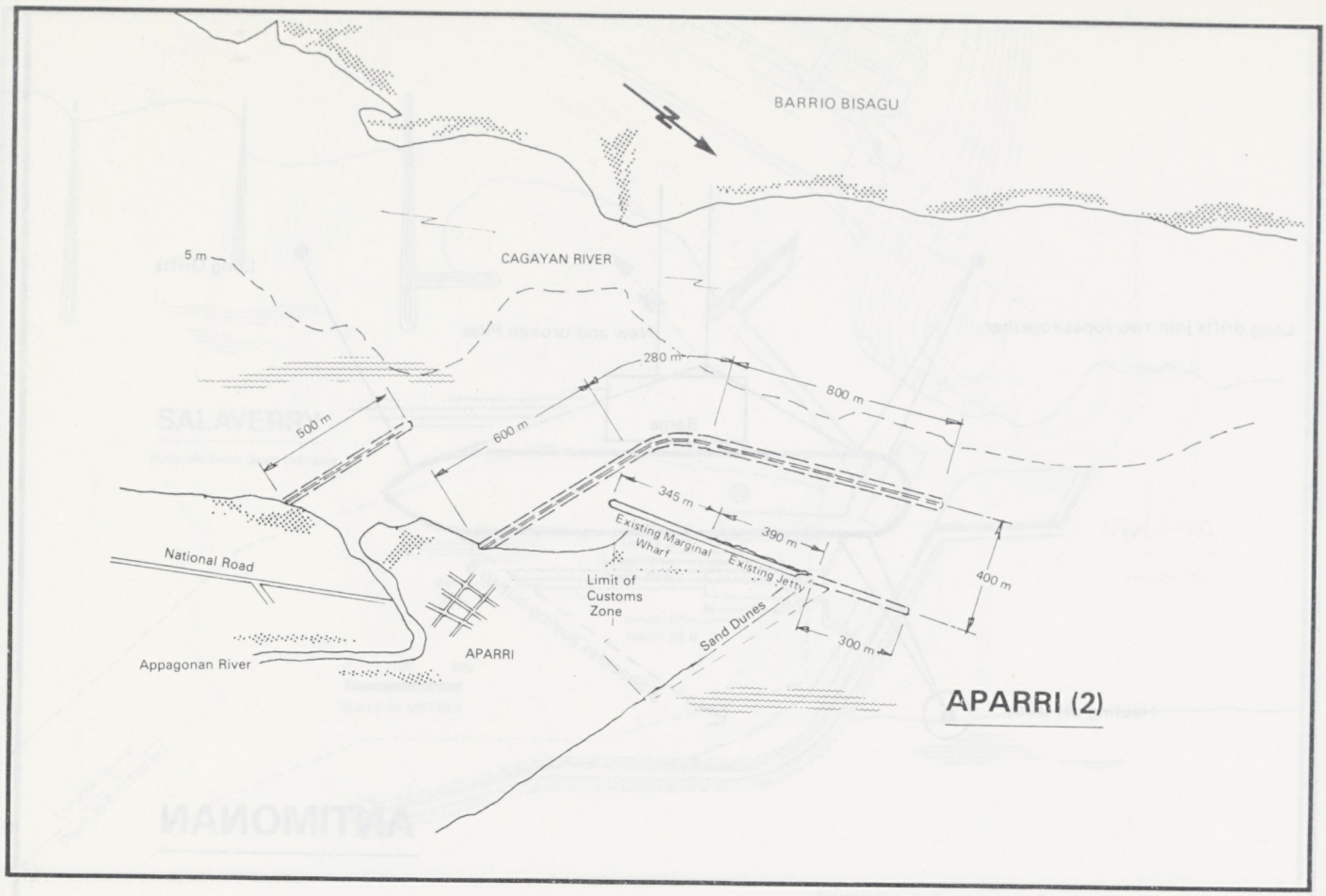

Stevedores' Amenities
C
OPEN STORAGE AREAS A to G
A
B
Transit Shed No.2
D
Port Manager's Office
122m
– 7.5m
Berth 1
Transit Shed
No.1
E
Copra Storage Shed
Western Quay
Coastal Wharf
58.2m
F
– 4.8m
58.2m
Feeder Wharf
Coastal Cargo Shed
G
Barge Ramp
0
20
40
60
80
100 Metres
KIETA
Depths minimum at L.A.T.


10 metres offset from line of fenders
−16.4 m. −15.3 m. −14.5 m. −13.7 m. −14.0 m. −14.8 m. −14.2 m. −14.6 m. −14.5 m. −14.0 m. −14.7 m. −13.4 m. −13.1 m. −13.8 m. −12.4 m. −10.5 m. −8.5 m.
Line of fenders
−10.3 m. −10.3 m. −10.7 m. −9.4 m. −8.6 m. −9.2 m. −9.5 m. −9.5 m. −10.9 m. −9.4 m. −9.5 m. −10.3 m. −9.5 m. −8.4 m. −7.1 m. −6.4 m. −5.8 m.
Kieta Overseas Wharf
Notes 1. Soundings are in metres and relate to L.A.T. Datum

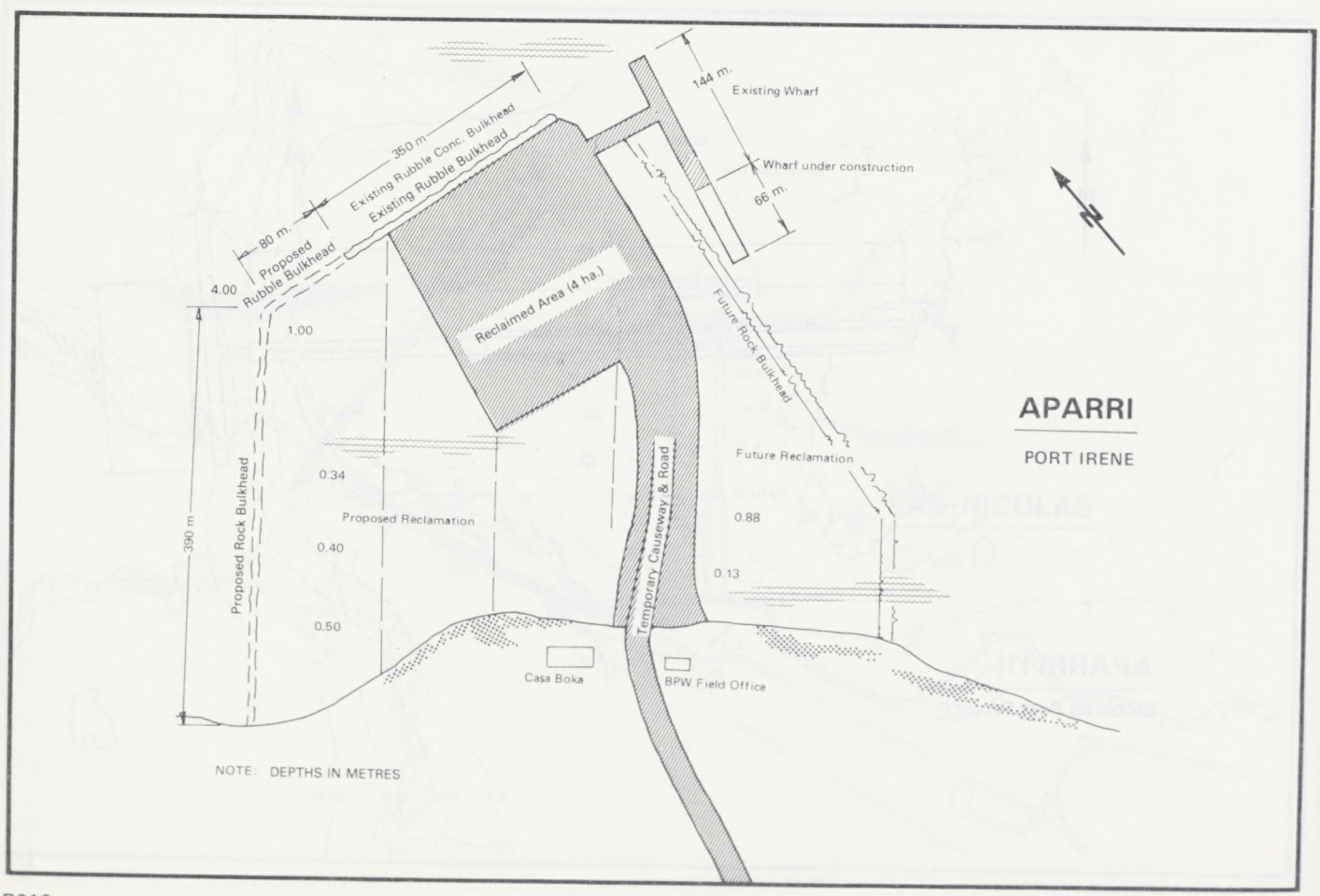
KIETA


KIMBE
10.7m
61m
Berth 1
Berth 2
5.5m
Berth 3
5.9m
Barge Ramp
Port Manager's Office
Proposed Extension
Transit Shed
Storage Area
Stevedores' Amenities
0 10 20 30 40 50 Metres
Depths minimum at L.A.T.


LAE
Mock-up of Ship's hold (Stevedores' Training)
Mechanical Operators Training Area
Stevedores' Amenities
Oil Loading/Discharging Facility
Car Park
Port Manager's Office
Entrance to Wharf Area
Pacific Islands Shipping Co.
Medical Store
Cargo Shed
No. 3 Shed
No. 3 Berth
11.0m
184m
No. 2 Shed
No. 2 Berth
11.0 m.
246m
No. 6 Shed
No. 1B Shed
No. 1 Berth
No. 5 Shed
No. 1A Shed
Harbours Board Quarters
Harbours Board Workshop
Gas Supply (New Guinea) Pty. Ltd. Depot
Barge Ramp
No. 5 Berth
No. 4 Berth
Length 54 m.
−4.9m
Tug/Pilot Boat Berth
Length 35 m.
−2.7 m.
−2.7m
0 20 40 60 80 100 Metres
Depths minimum at L.A.T.

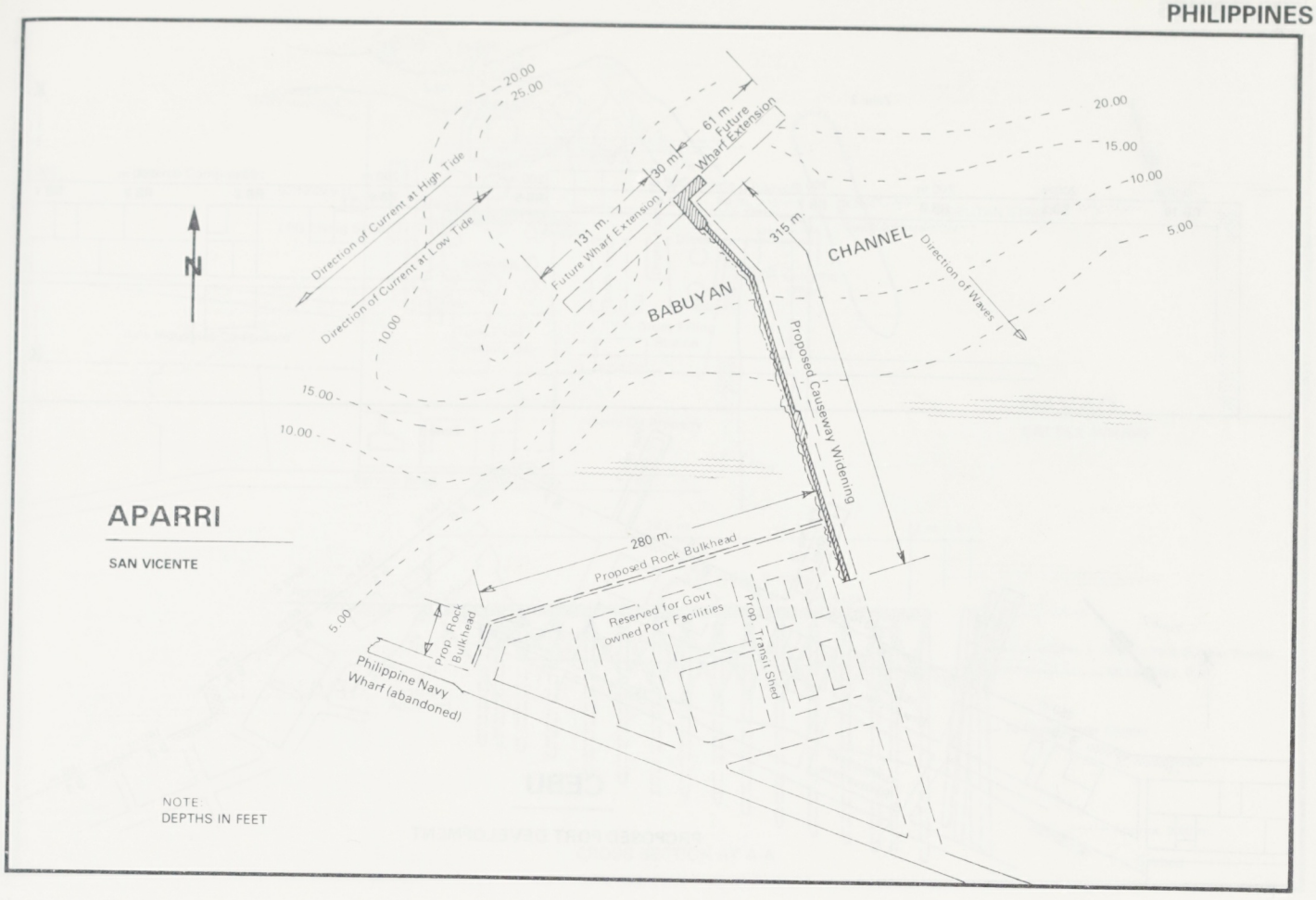


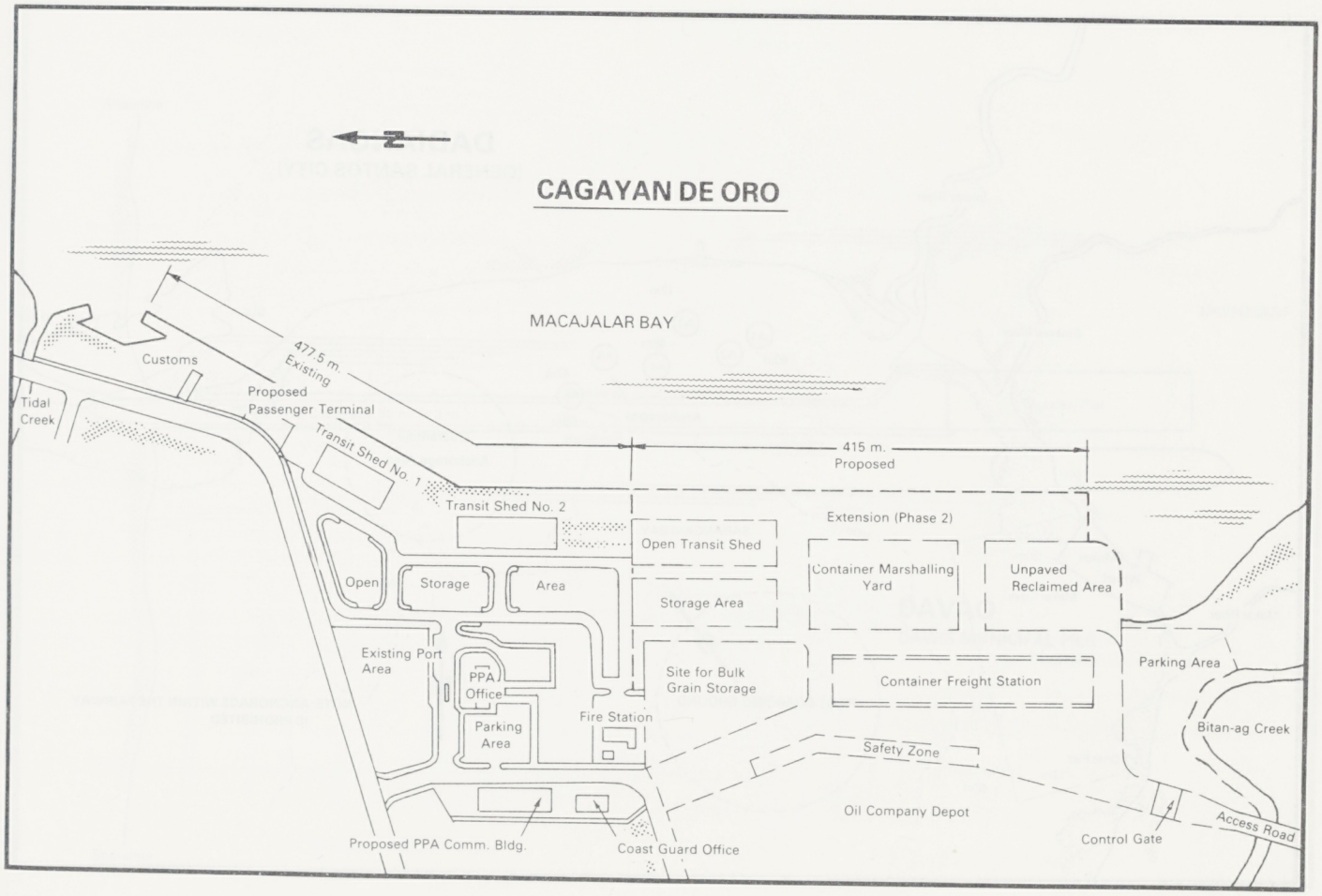
APARRI (2)

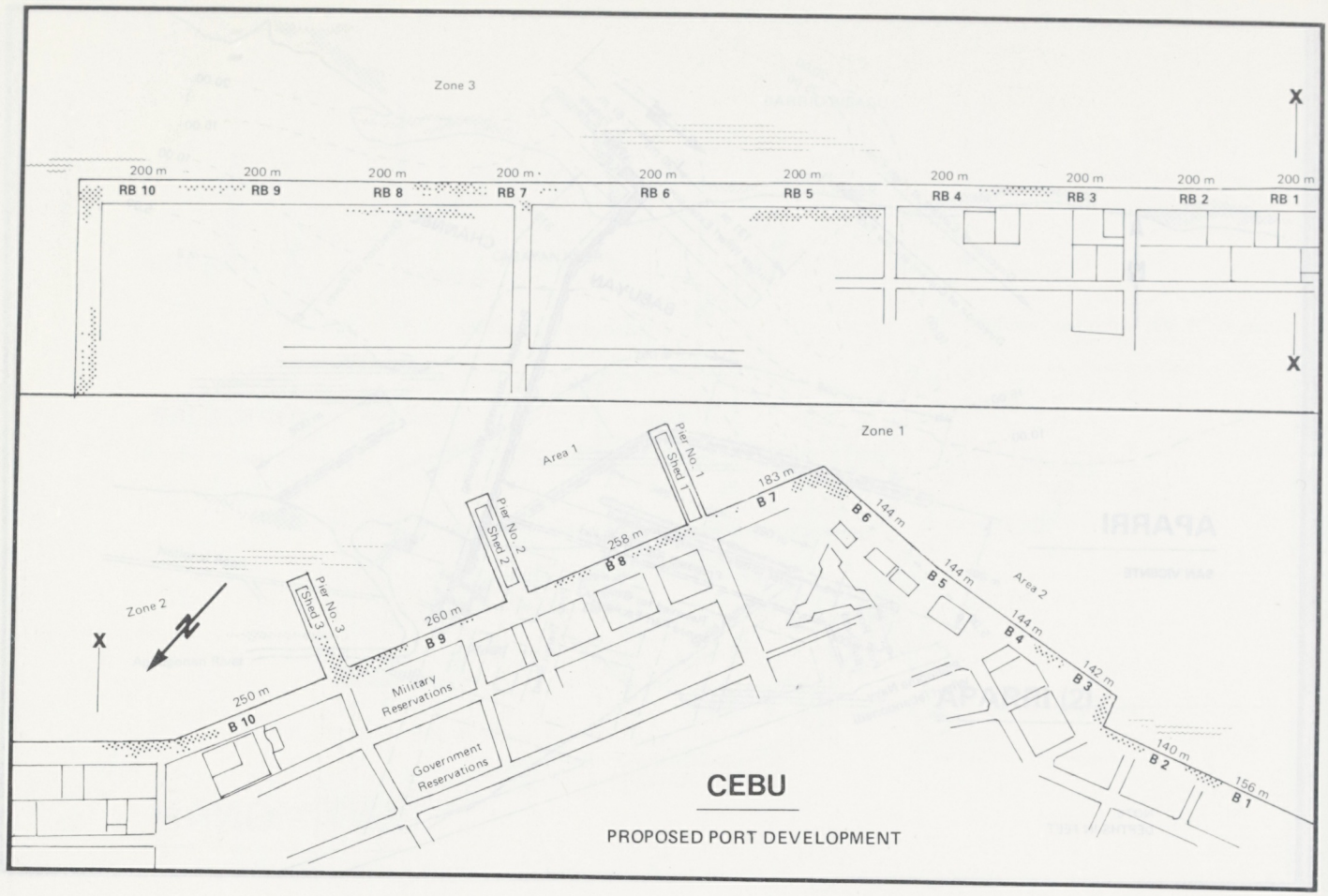


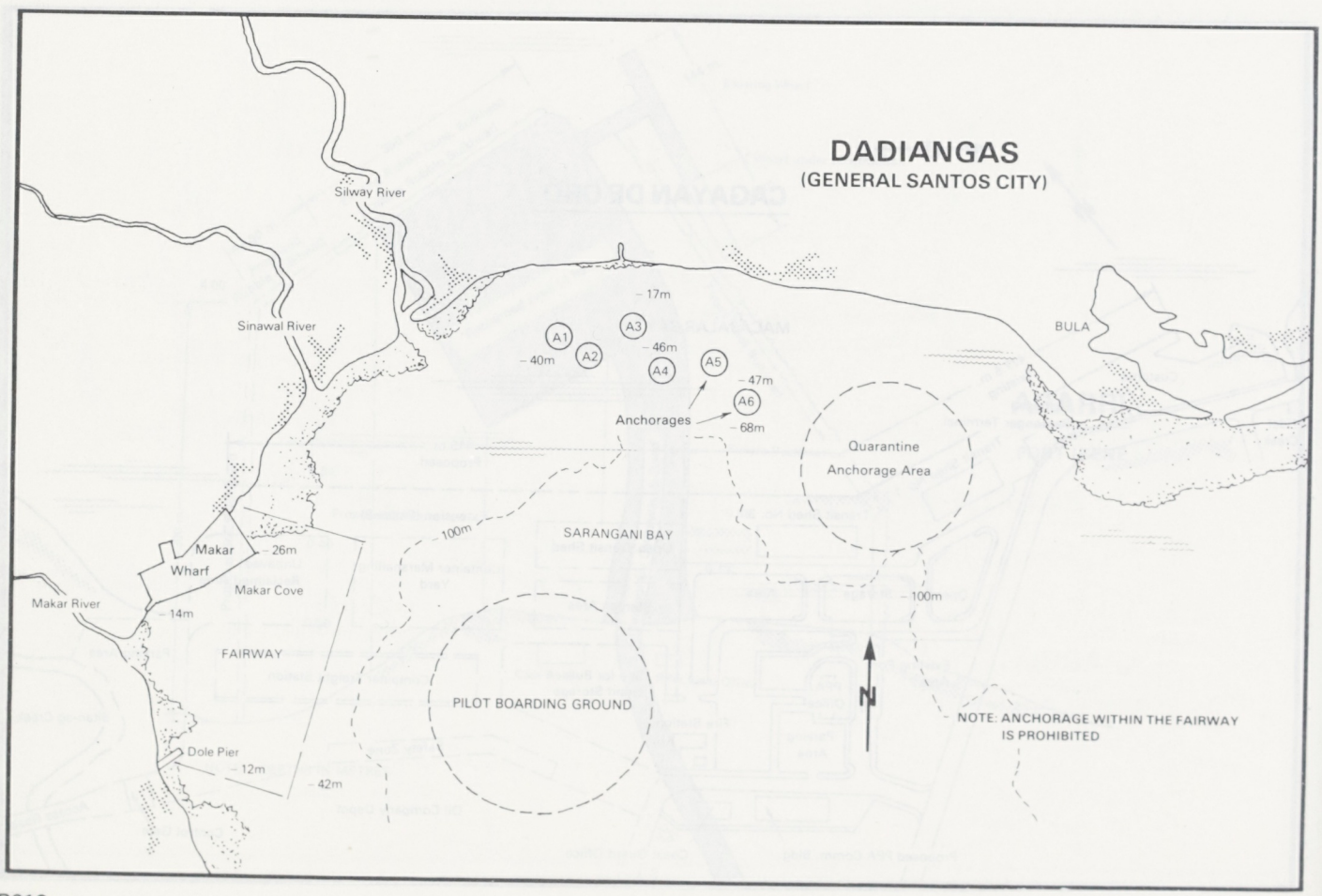
APARRI

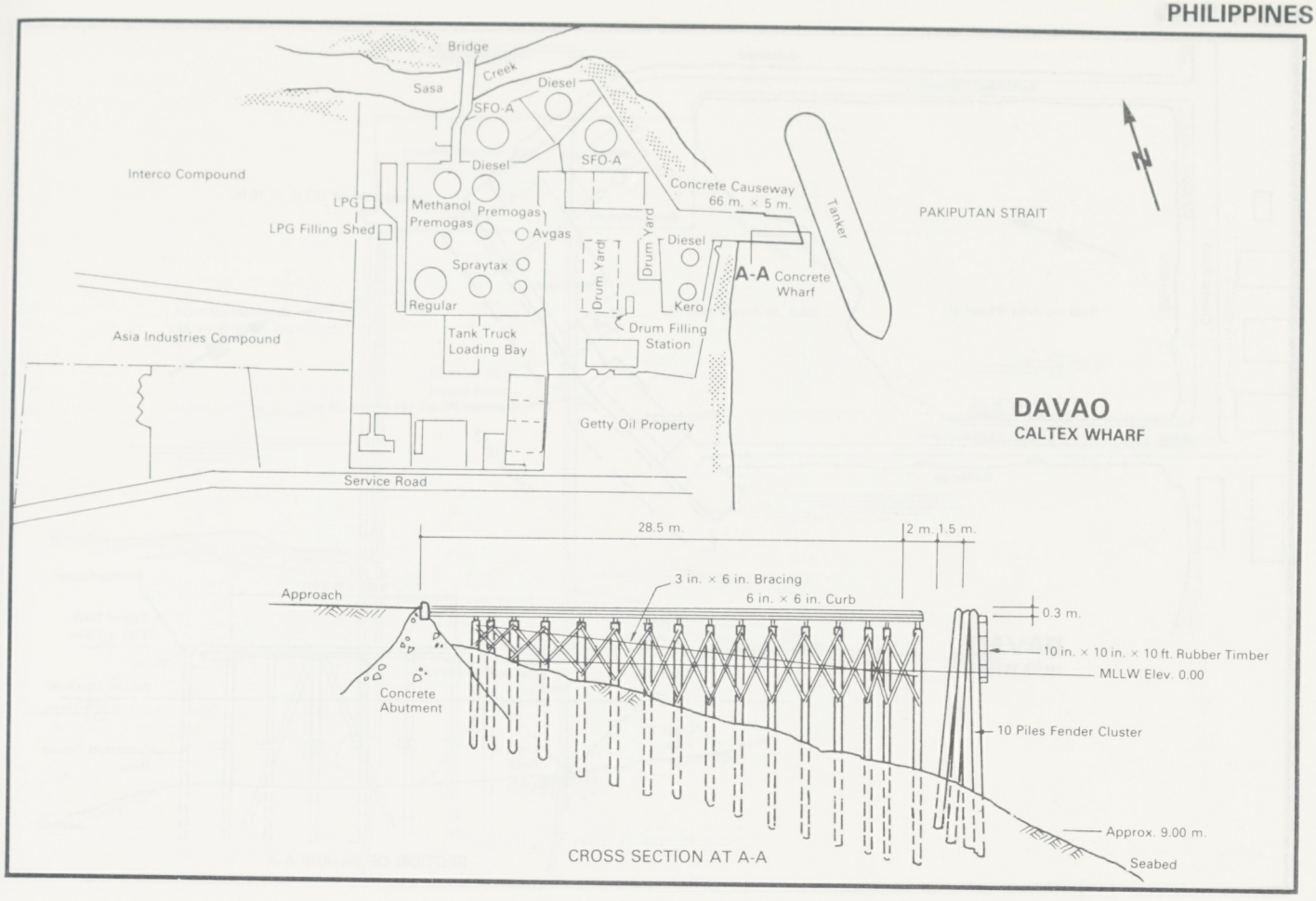
PORT IRENE

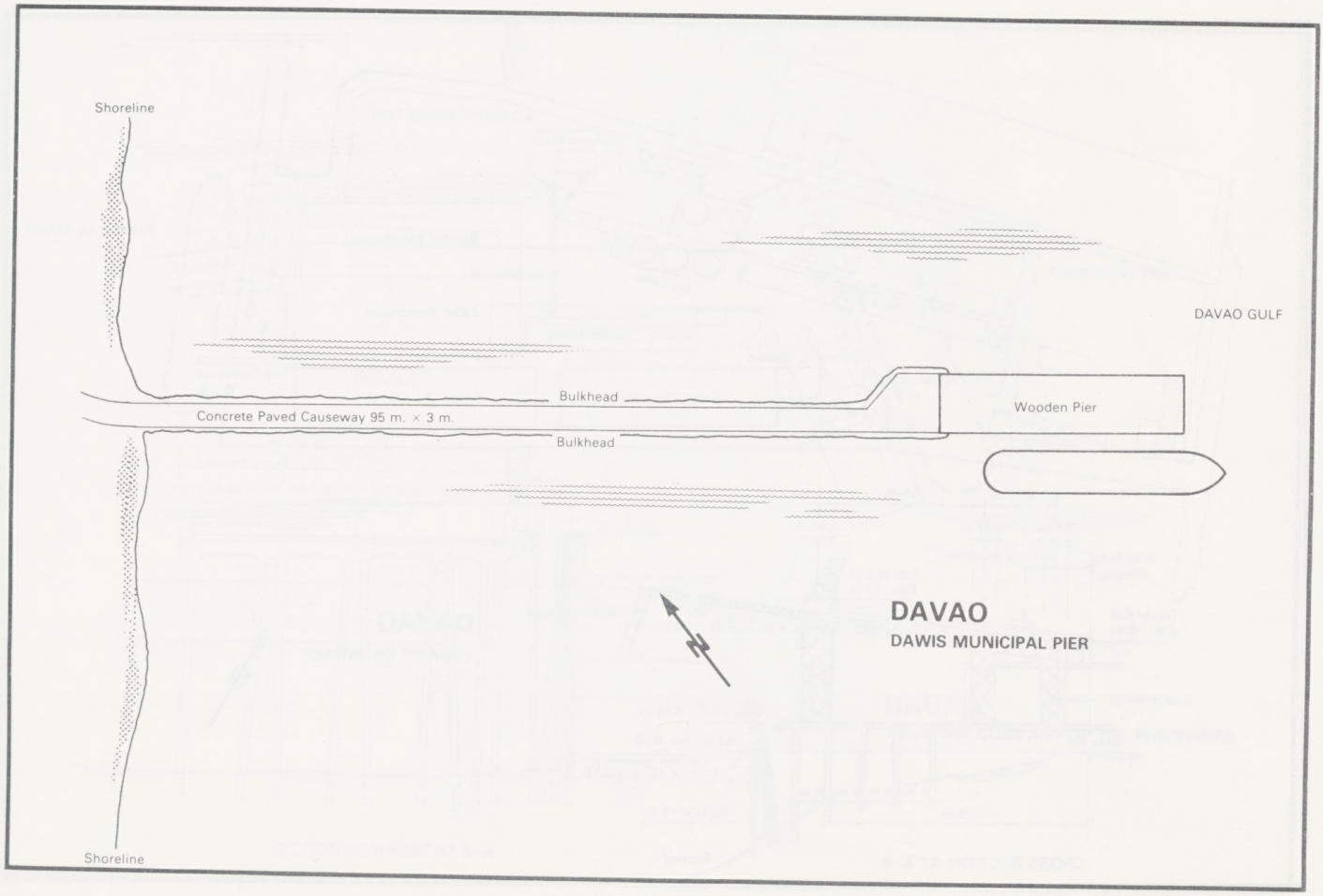

N
Direction of Current at High Tide
Direction of Current at Low Tide
20.00
25.00
10.00
15.00
131 m.
Future Wharf Extension
30 m.
61 m.
Future Wharf Extension
315 m.
CHANNEL
Direction of Waves
20.00
15.00
10.00
5.00
BABUYAN
Proposed Causeway Widening
APARRI
SAN VICENTE
280 m.
Proposed Rock Bulkhead
Prop. Rock Bulkhead
Reserved for Govt owned Port Facilities
Prop. Transit Shed
Philippine Navy Wharf (abandoned)
NOTE:
DEPTHS IN FEET

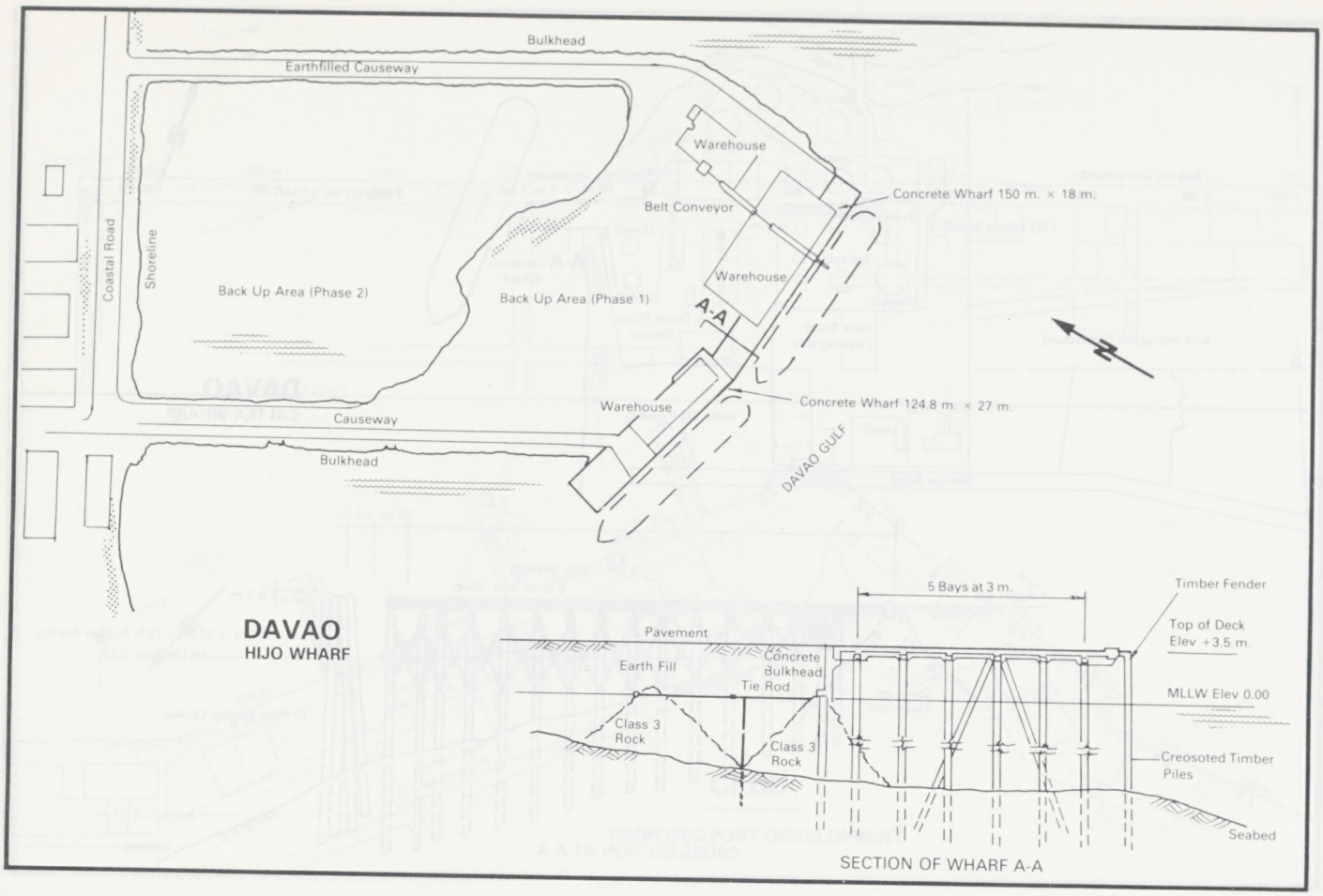

N
CAGAYAN DE ORO
MACAJALAR BAY
Customs
477.5 m.
Existing
Proposed
Passenger Terminal
Tidal Creek
Transit Shed No. 1
Transit Shed No. 2
415 m.
Proposed
Extension (Phase 2)
Open Transit Shed
Container Marshalling Yard
Unpaved Reclaimed Area
Open
Storage
Area
Storage Area
Existing Port Area
PPA Office
Parking Area
Fire Station
Site for Bulk Grain Storage
Container Freight Station
Parking Area
Bitan-ag Creek
Safety Zone
Oil Company Depot
Access Road
Control Gate
Proposed PPA Comm. Bldg.
Coast Guard Office

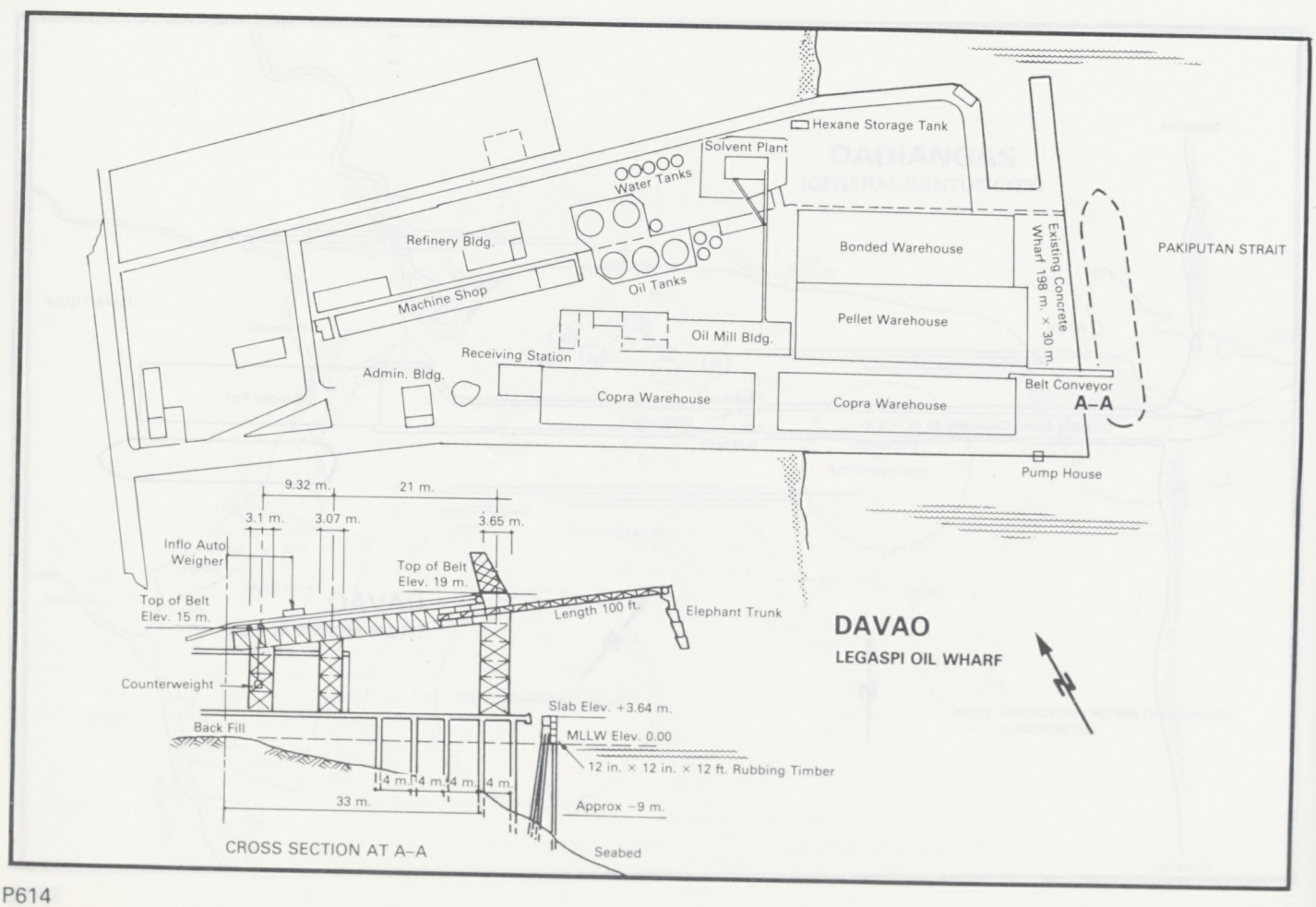

Zone 3
X
200 m
RB 10
RB 9
RB 8
RB 7
RB 6
RB 5
RB 4
RB 3
RB 2
RB 1
X
Zone 1
Area 1
Pier No. 1
Shed 1
183 m
B 7
B 6
144 m
B 5
144 m
Area 2
B 4
144 m
B 3
142 m
B 2
140 m
B 1
156 m
Pier No. 2
Shed 2
258 m
B 8
Zone 2
X
Pier No. 3
Shed 3
260 m
B 9
250 m
B 10
Military Reservations
Government Reservations
CEBU
PROPOSED PORT DEVELOPMENT

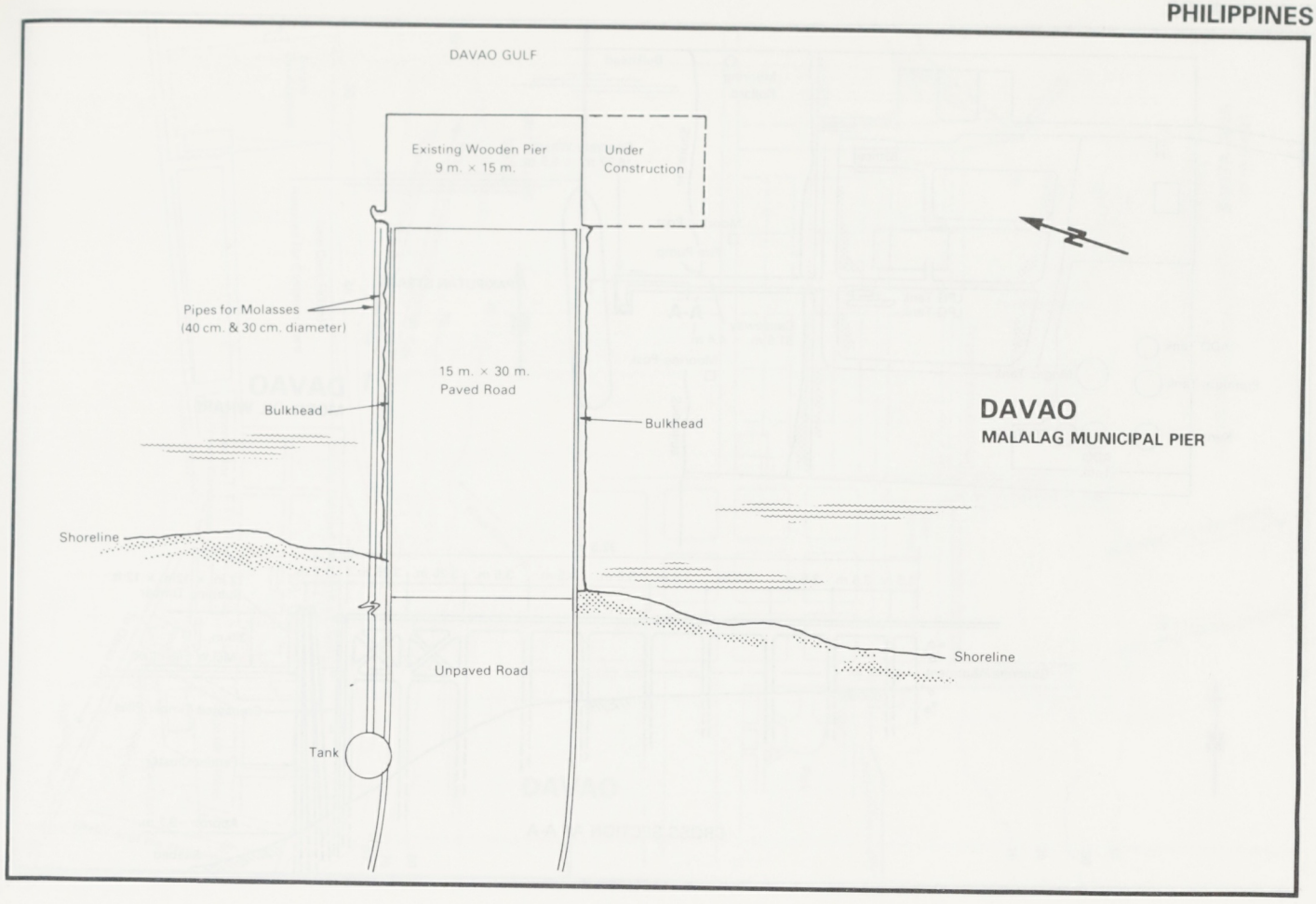

DADIANGAS
(GENERAL SANTOS CITY)
Silway River
Sinawal River
BULA
17m
A3
A1
A2
40m
46m
A4
A5
47m
A6
68m
Anchorages
Quarantine
Anchorage Area
100m
SARANGANI BAY
Makar
Wharf
26m
Makar Cove
Makar River
14m
FAIRWAY
PILOT BOARDING GROUND
100m
N
Dole Pier
12m
42m
NOTE: ANCHORAGE WITHIN THE FAIRWAY
IS PROHIBITED


Bridge
Creek
Sasa
Diesel
SFO-A
SFO-A
Diesel
Interco Compound
LPG
LPG Filling Shed
Methanol
Premogas
Premogas
Avgas
Spraytax
Regular
Drum Yard
Drum Yard
Diesel
Kero
A-A
Concrete Wharf
Concrete Causeway 66 m. × 5 m.
Tanker
PAKIPUTAN STRAIT
Asia Industries Compound
Tank Truck Loading Bay
Drum Filling Station
Getty Oil Property
Service Road
DAVAO
CALTEX WHARF
28.5 m.
2 m.
1.5 m.
3 in. × 6 in. Bracing
6 in. × 6 in. Curb
Approach
0.3 m.
10 in. × 10 in. × 10 ft. Rubber Timber
MLLW Elev. 0.00
Concrete Abutment
10 Piles Fender Cluster
Approx. 9.00 m.
Seabed
CROSS SECTION AT A-A

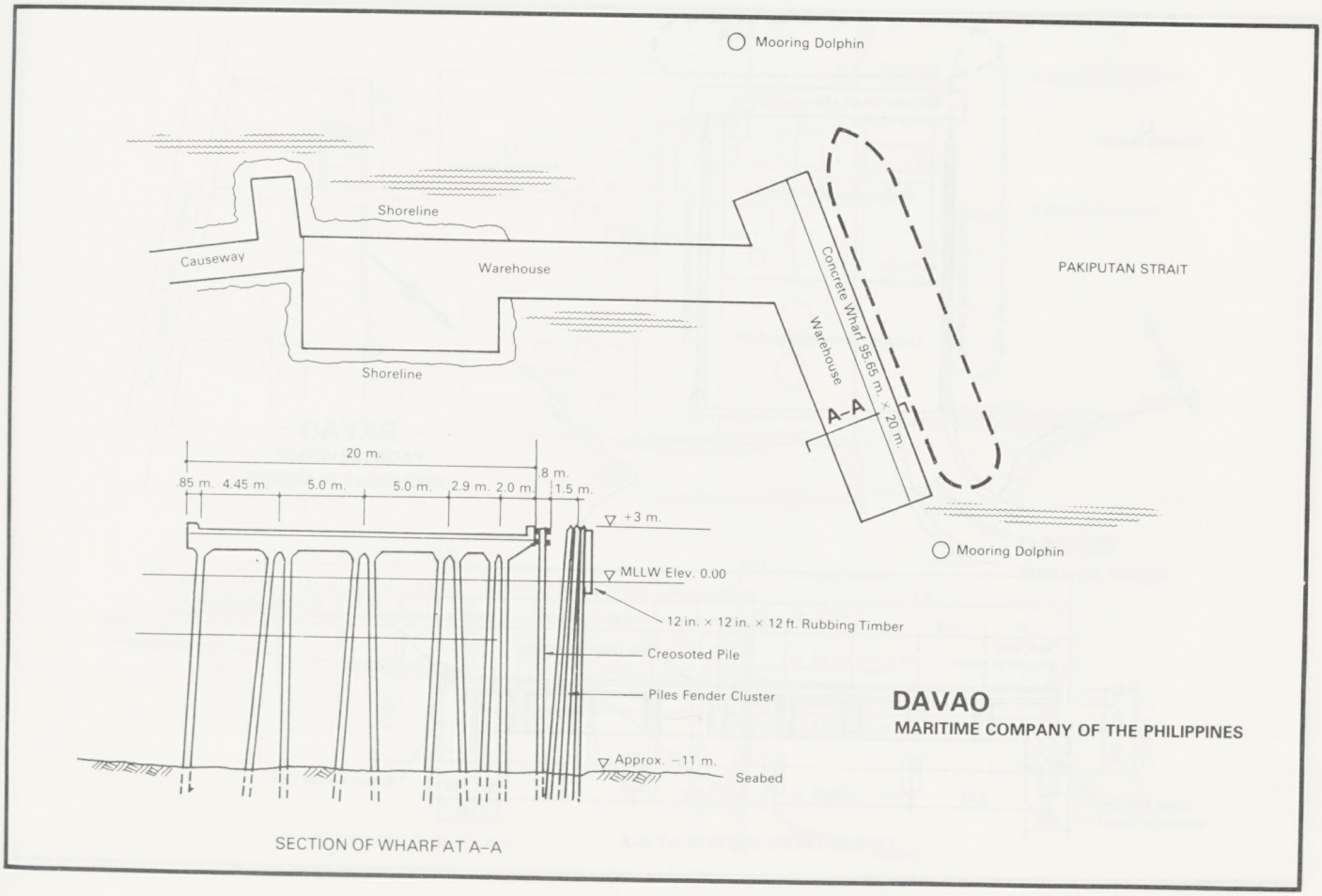

Shoreline
DAVAO GULF
Bulkhead
Concrete Paved Causeway 95 m. × 3 m.
Bulkhead
Wooden Pier
Shoreline
DAVAO
DAWIS MUNICIPAL PIER


Bulkhead
Earthfilled Causeway
Warehouse
Belt Conveyor
Concrete Wharf 150 m. × 18 m.
Coastal Road
Shoreline
Back Up Area (Phase 2)
Back Up Area (Phase 1)
Warehouse
A-A
Warehouse
Concrete Wharf 124.8 m. × 27 m.
Causeway
Bulkhead
DAVAO GULF
DAVAO
HIJO WHARF
5 Bays at 3 m.
Timber Fender
Top of Deck Elev +3.5 m.
Pavement
Earth Fill
Concrete Bulkhead
Tie Rod
MLLW Elev 0.00
Class 3 Rock
Class 3 Rock
Creosoted Timber Piles
Seabed
SECTION OF WHARF A-A


Hexane Storage Tank
Solvent Plant
Water Tanks
Refinery Bldg.
Bonded Warehouse
Existing Concrete Wharf 198 m. × 30 m.
PAKIPUTAN STRAIT
Machine Shop
Oil Tanks
Pellet Warehouse
Oil Mill Bldg.
Receiving Station
Admin. Bldg.
Copra Warehouse
Copra Warehouse
Belt Conveyor
A–A
Pump House
9.32 m.
21 m.
3.1 m.
3.07 m.
3.65 m.
Inflo Auto Weigher
Top of Belt Elev. 19 m.
Top of Belt Elev. 15 m.
Length 100 ft.
Elephant Trunk
DAVAO
LEGASPI OIL WHARF
Counterweight
Slab Elev. +3.64 m.
Back Fill
MLLW Elev. 0.00
12 in. × 12 in. × 12 ft. Rubbing Timber
4 m.
4 m.
4 m.
4 m.
33 m.
Approx −9 m.
CROSS SECTION AT A–A
Seabed

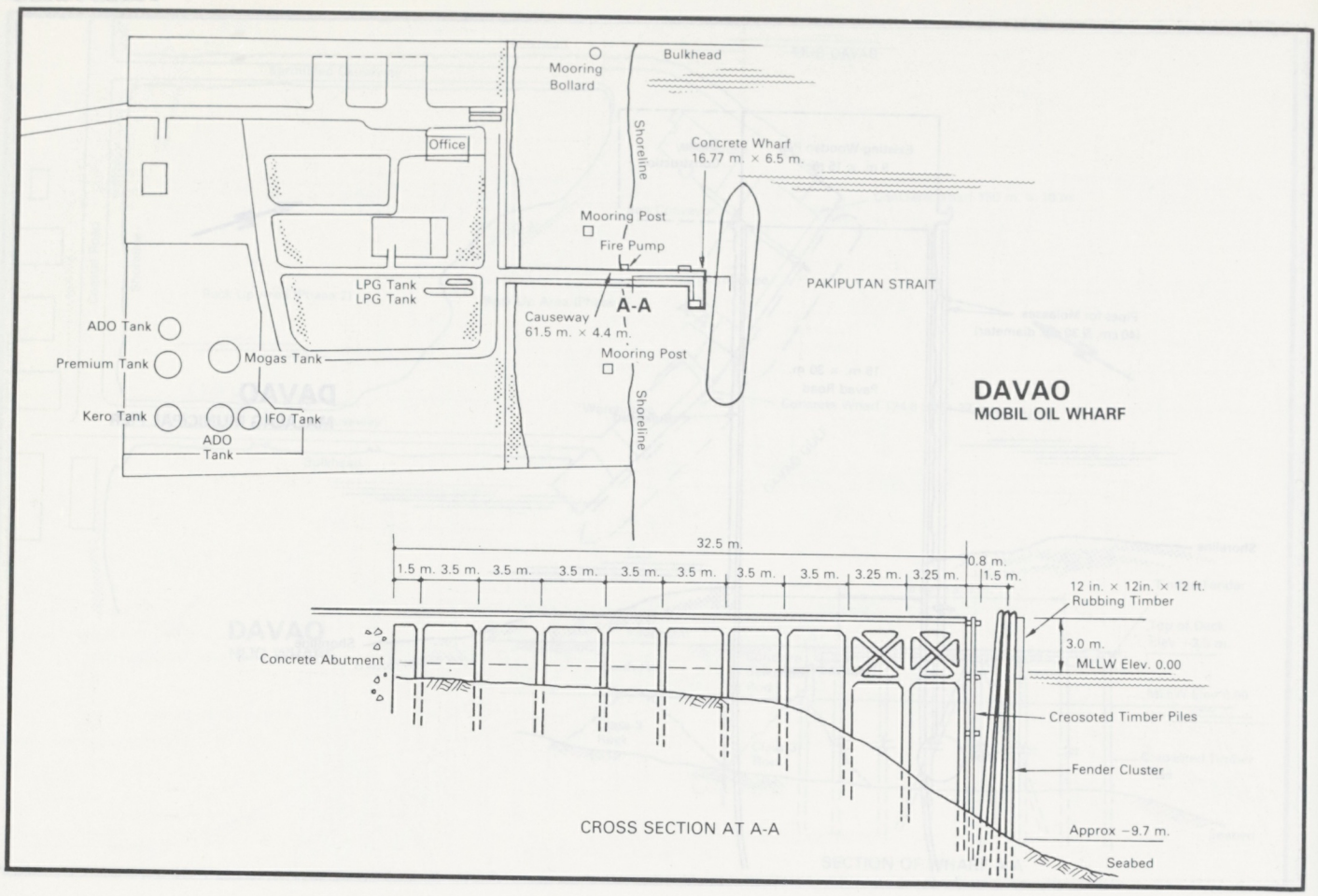


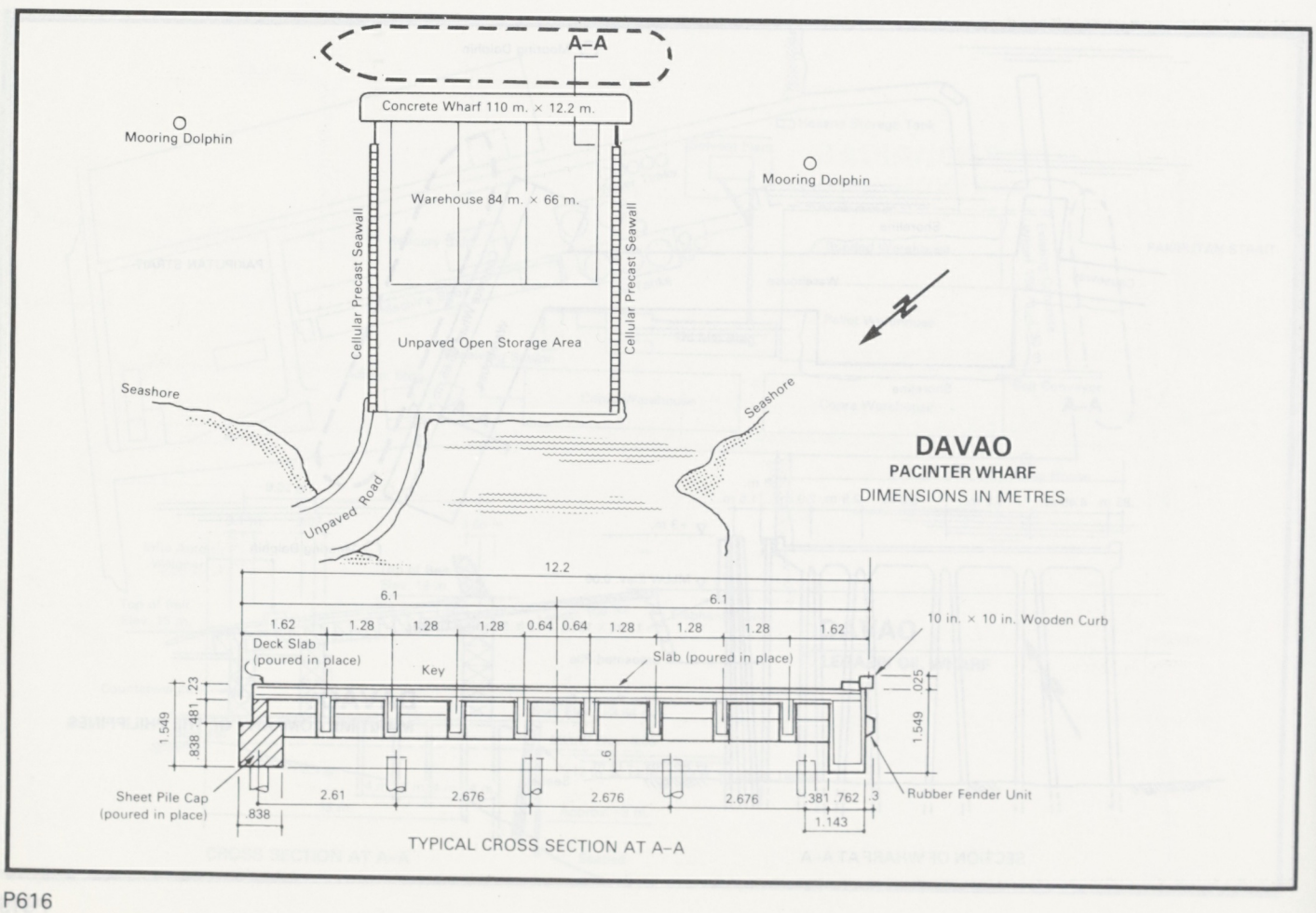
DAVAO
MALALAG MUNICIPAL PIER

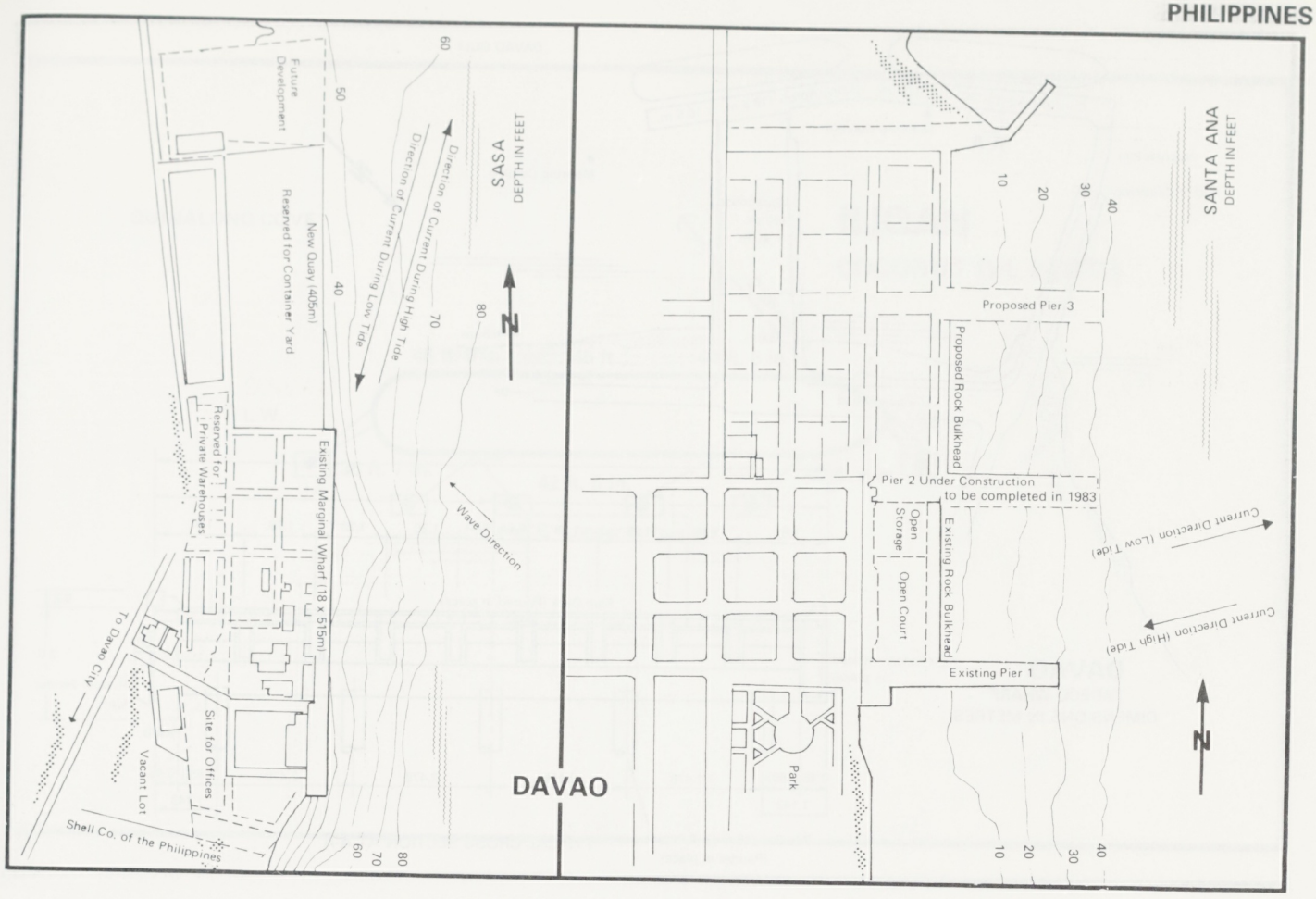


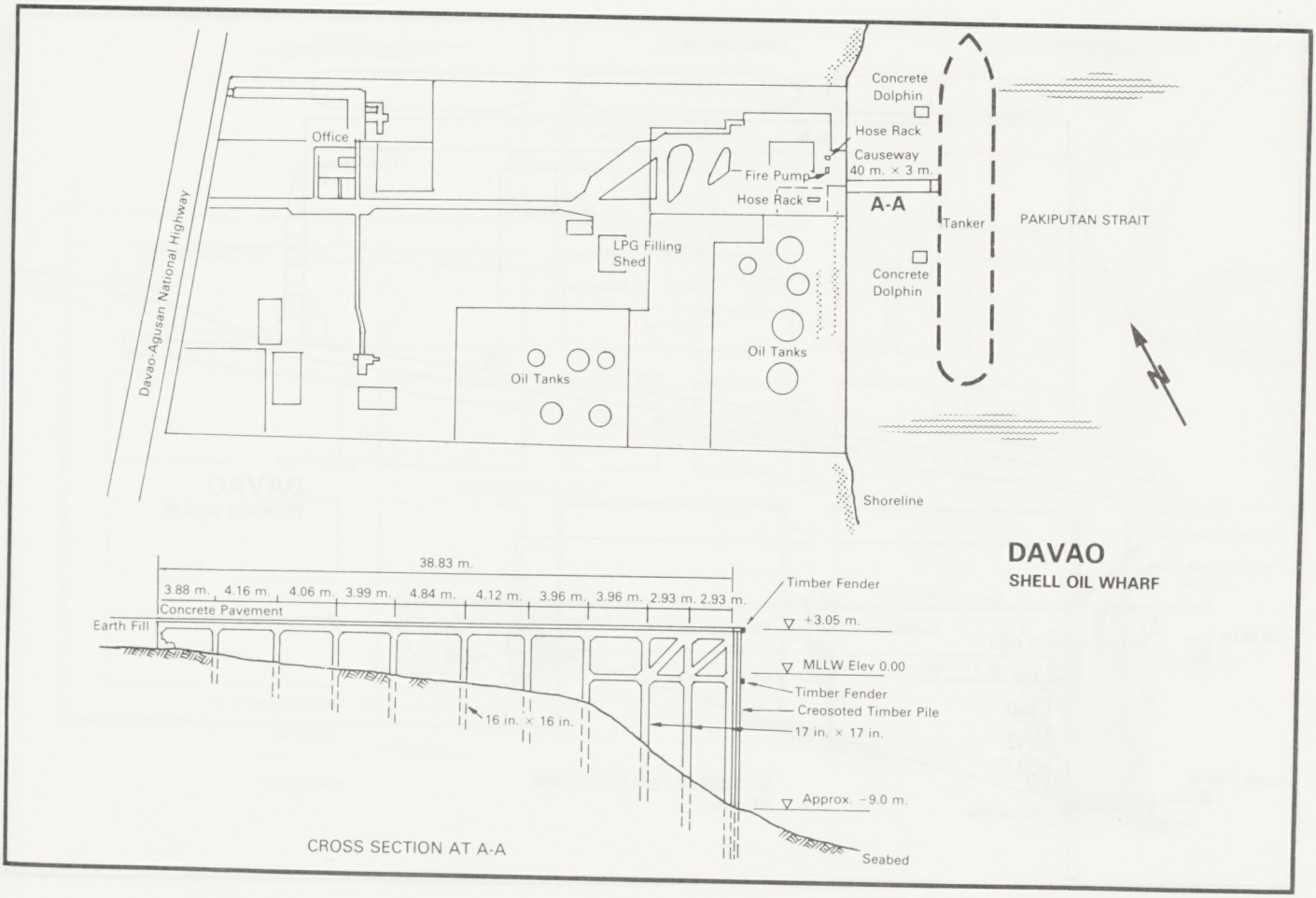
SECTION OF WHARF AT A–A

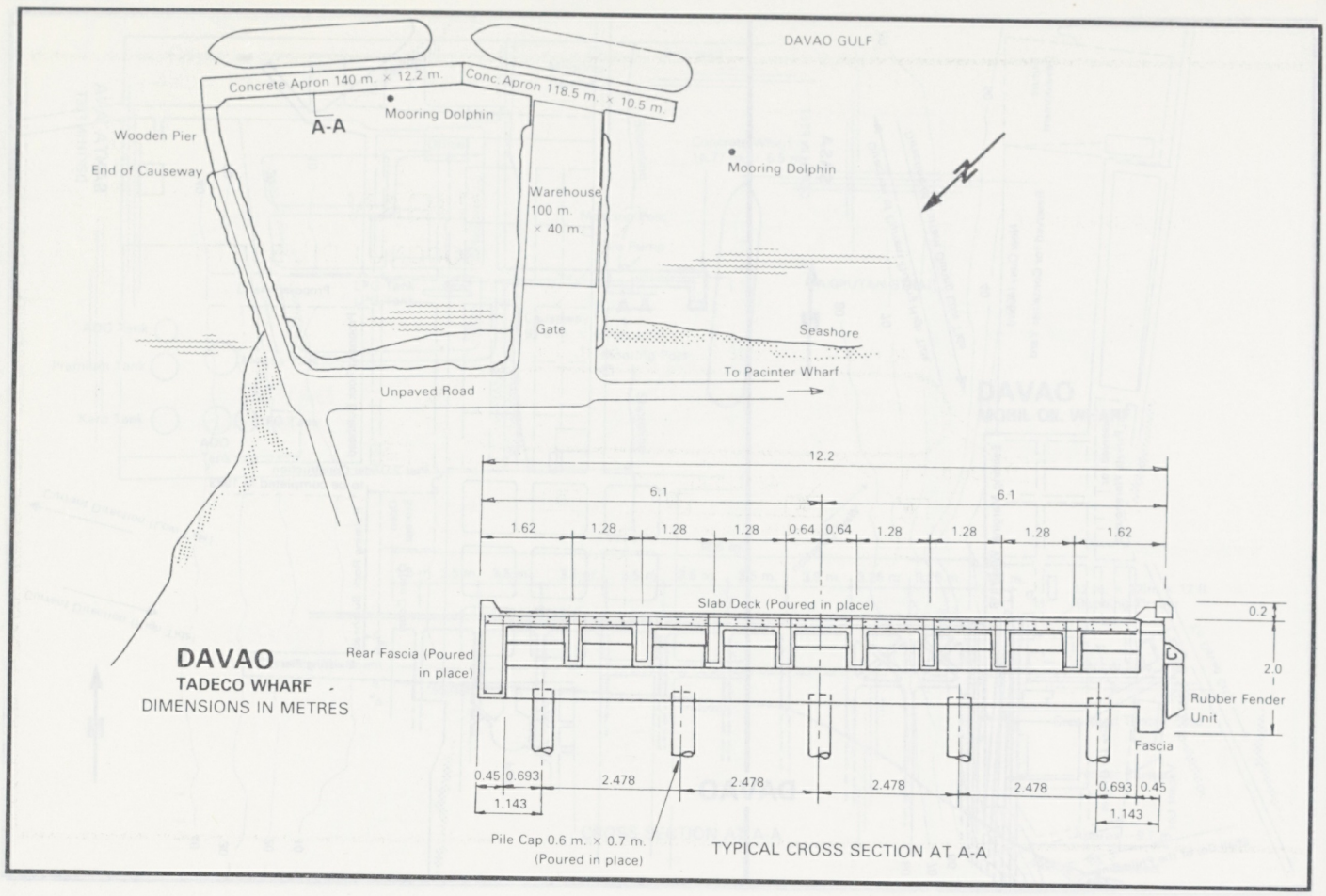
DAVAO
MARITIME COMPANY OF THE PHILIPPINES

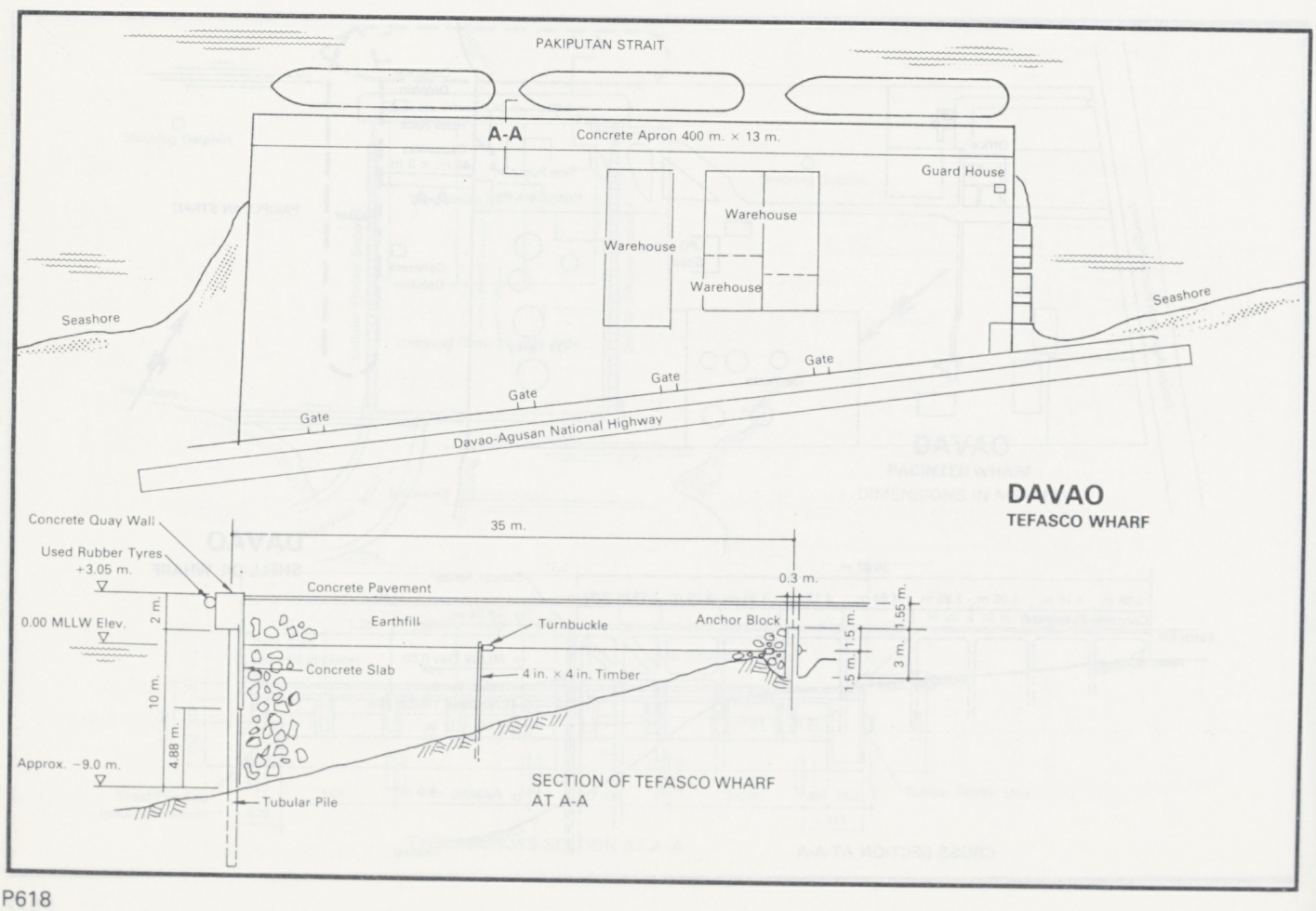

Mooring Bollard
Bulkhead
Shoreline
Office
Concrete Wharf 16.77 m. × 6.5 m.
Mooring Post
Fire Pump
PAKIPUTAN STRAIT
LPG Tank
LPG Tank
A-A
Causeway 61.5 m. × 4.4 m.
Mooring Post
ADO Tank
Premium Tank
Mogas Tank
Kero Tank
IFO Tank
ADO Tank
Shoreline
DAVAO
MOBIL OIL WHARF
32.5 m.
1.5 m. 3.5 m. 3.5 m. 3.5 m. 3.5 m. 3.5 m. 3.5 m. 3.5 m. 3.25 m. 3.25 m. 0.8 m. 1.5 m.
12 in. × 12in. × 12 ft. Rubbing Timber
3.0 m.
MLLW Elev. 0.00
Concrete Abutment
Creosoted Timber Piles
Fender Cluster
Approx −9.7 m.
Seabed
CROSS SECTION AT A-A

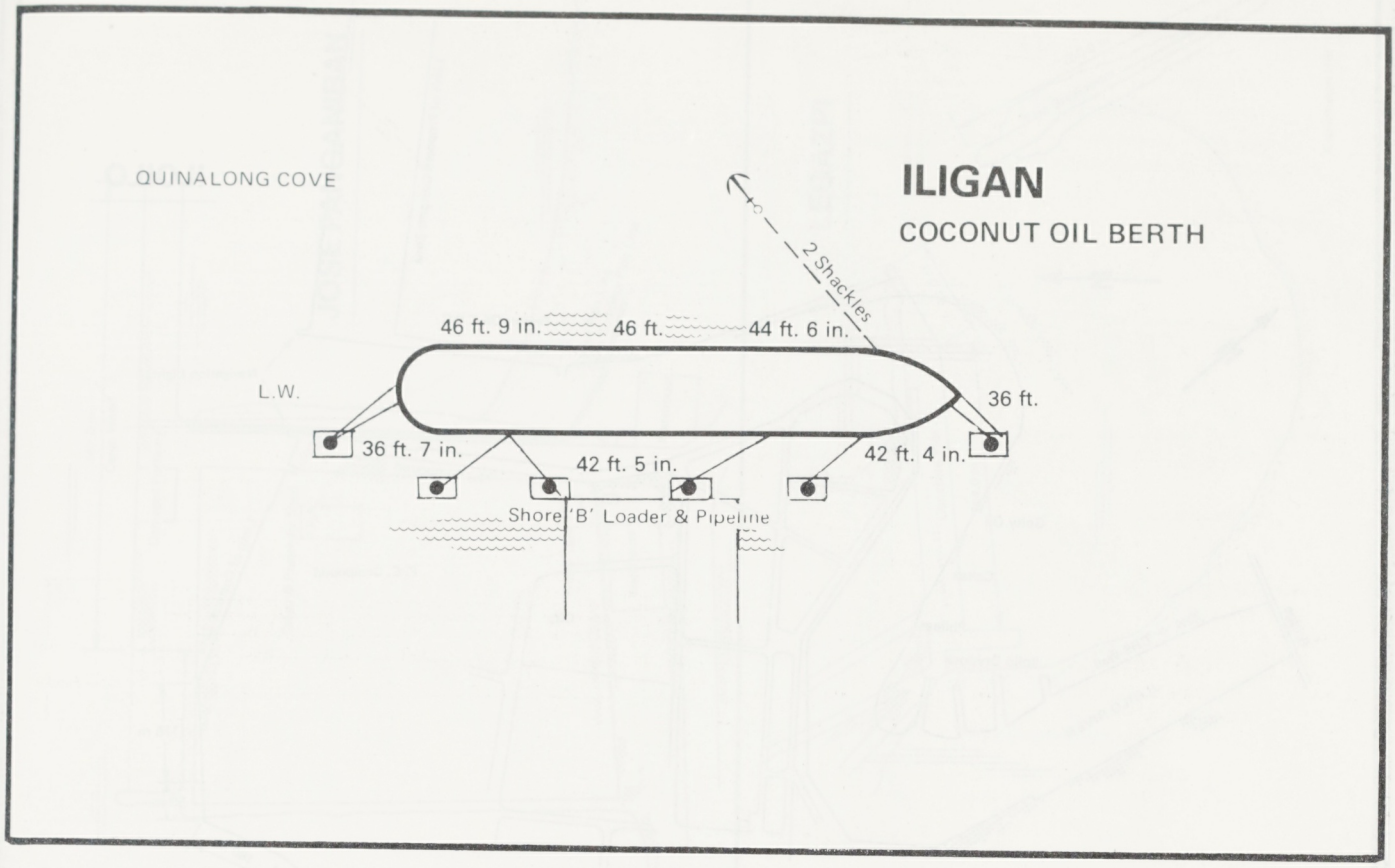

A–A
Concrete Wharf 110 m. × 12.2 m.
Mooring Dolphin
Mooring Dolphin
Warehouse 84 m. × 66 m.
Cellular Precast Seawall
Cellular Precast Seawall
Unpaved Open Storage Area
Seashore
Seashore
Unpaved Road
N
DAVAO
PACINTER WHARF
DIMENSIONS IN METRES
12.2
6.1
6.1
1.62 1.28 1.28 1.28 0.64 0.64 1.28 1.28 1.28 1.62
Deck Slab (poured in place)
Key
Slab (poured in place)
10 in. × 10 in. Wooden Curb
.025
.23
.481
.838
1.549
1.549
.6
Sheet Pile Cap (poured in place)
.838
2.61
2.676
2.676
2.676
.381 .762 .3
1.143
Rubber Fender Unit
TYPICAL CROSS SECTION AT A–A

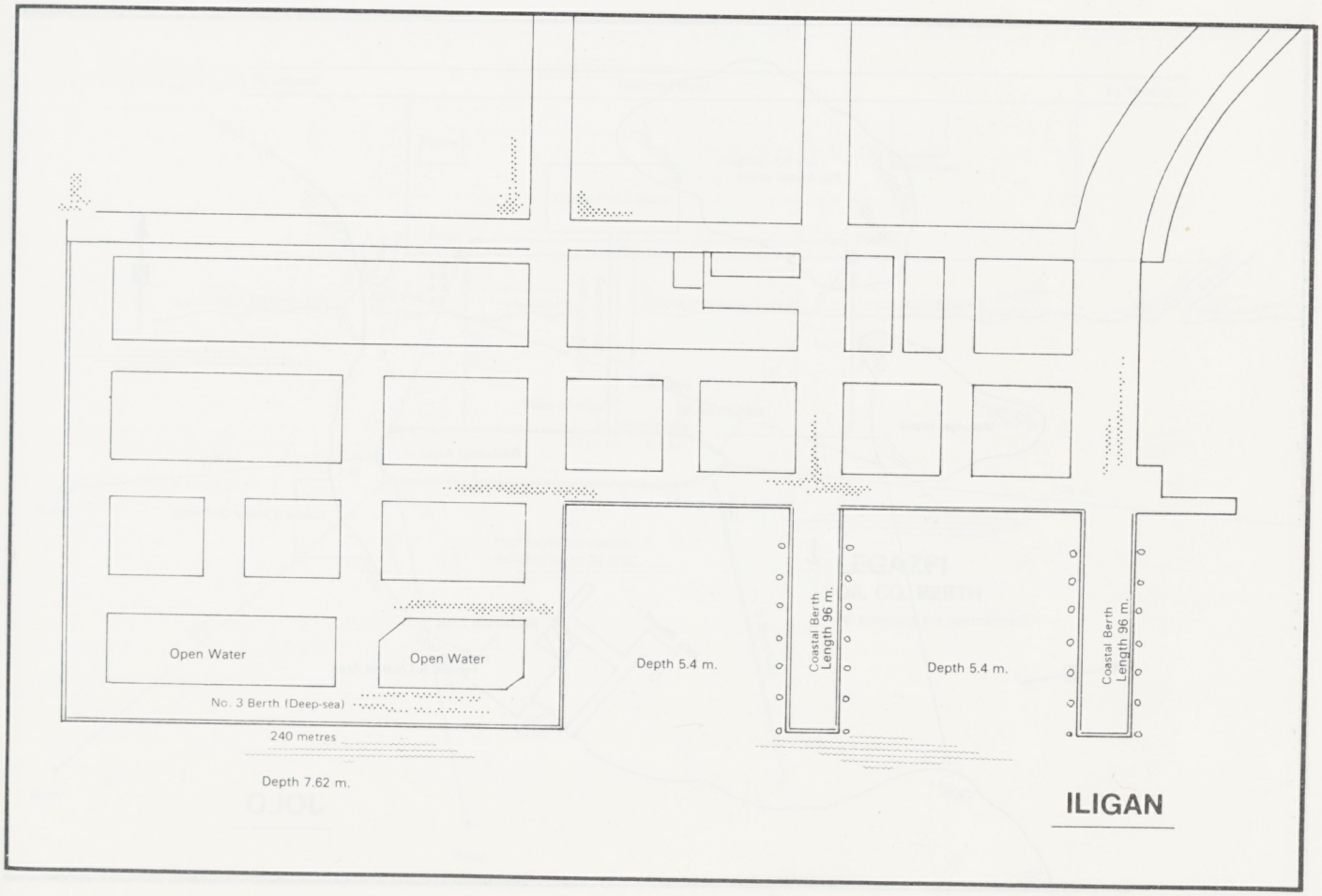

SASA
DEPTH IN FEET
SANTA ANA
DEPTH IN FEET
Future Development
New Quay (405m)
Reserved for Container Yard
Reserved for Private Warehouses
Existing Marginal Wharf (18 x 515m)
Direction of Current During Low Tide
Direction of Current During High Tide
Wave Direction
To Davao City
Site for Offices
Vacant Lot
Shell Co. of the Philippines
Proposed Pier 3
Proposed Rock Bulkhead
Pier 2 Under Construction
to be completed in 1983
Open Storage
Open Court
Existing Rock Bulkhead
Existing Pier 1
Current Direction (Low Tide)
Current Direction (High Tide)
Park
DAVAO

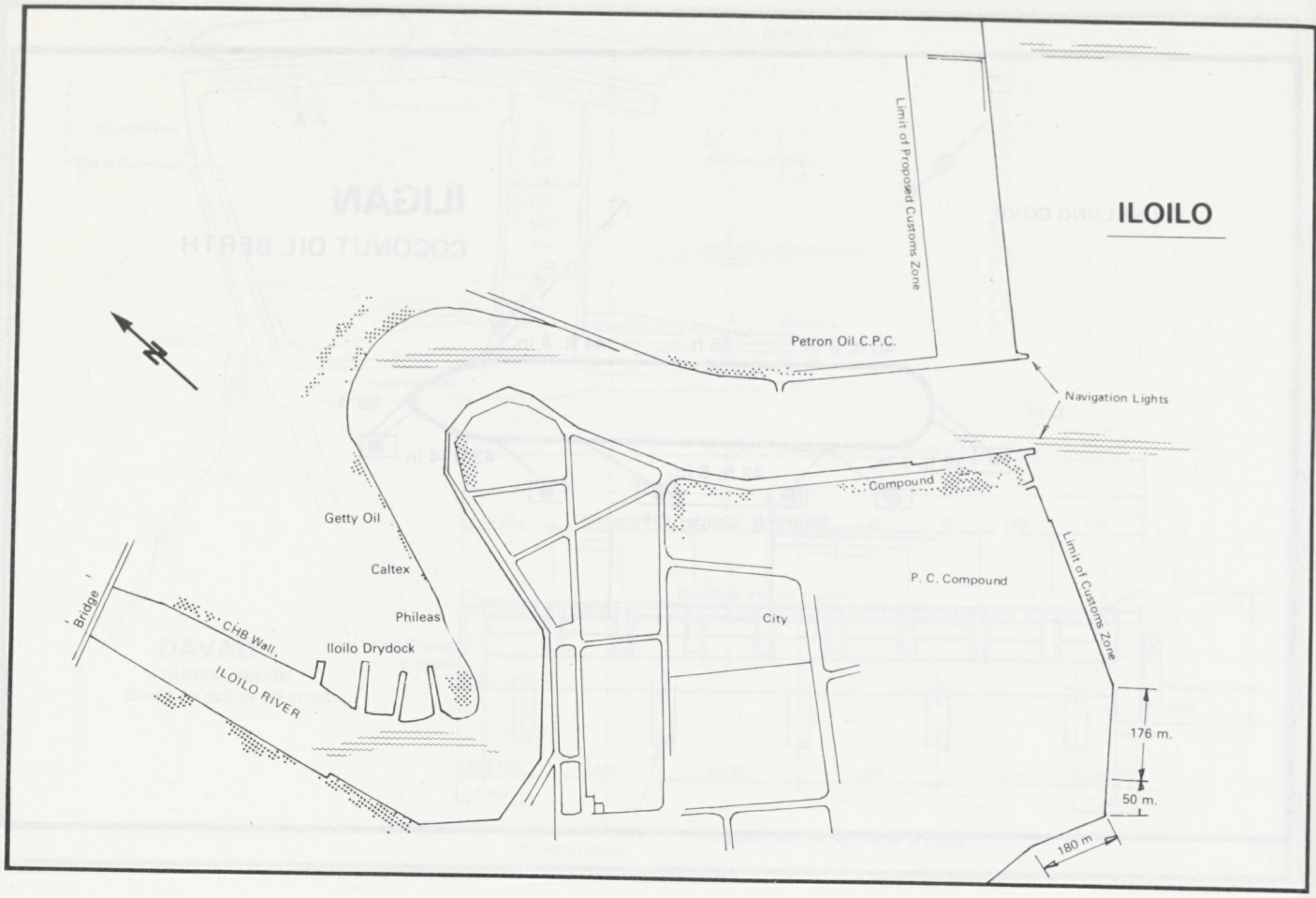

Davao-Agusan National Highway
Office
LPG Filling Shed
Oil Tanks
Oil Tanks
Concrete Dolphin
Hose Rack
Causeway 40 m. × 3 m.
Fire Pump
Hose Rack
A-A
Tanker
PAKIPUTAN STRAIT
Concrete Dolphin
Shoreline
DAVAO
SHELL OIL WHARF
38.83 m.
3.88 m. 4.16 m. 4.06 m. 3.99 m. 4.84 m. 4.12 m. 3.96 m. 3.96 m. 2.93 m. 2.93 m.
Concrete Pavement
Earth Fill
Timber Fender
+3.05 m.
MLLW Elev 0.00
Timber Fender
Creosoted Timber Pile
16 in. × 16 in.
17 in. × 17 in.
Approx. −9.0 m.
Seabed
CROSS SECTION AT A-A

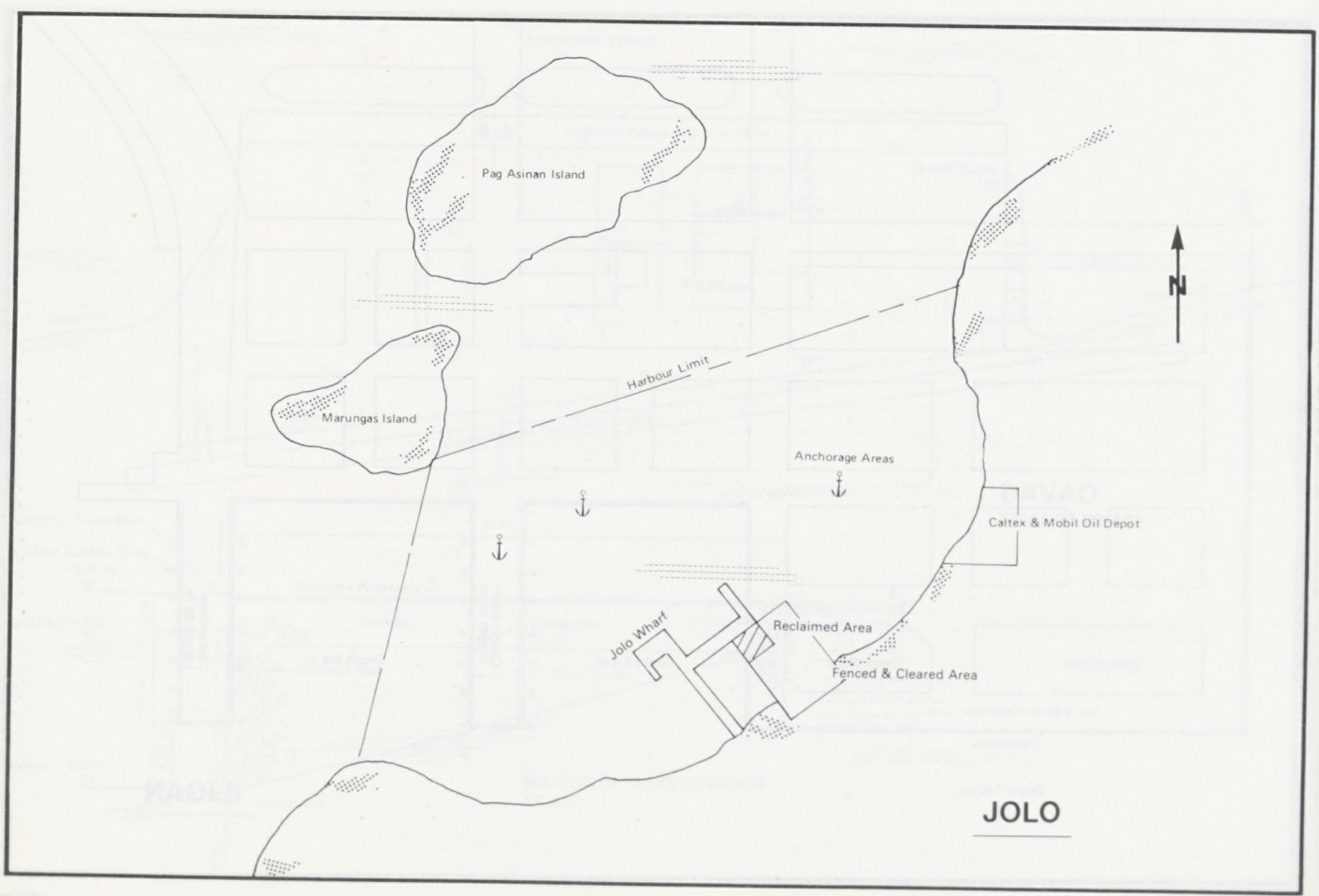

DAVAO GULF
Concrete Apron 140 m. × 12.2 m.
Conc. Apron 118.5 m. × 10.5 m.
Mooring Dolphin
A-A
Wooden Pier
End of Causeway
Mooring Dolphin
Warehouse
100 m.
× 40 m.
Gate
Seashore
To Pacinter Wharf
Unpaved Road
DAVAO
TADECO WHARF
DIMENSIONS IN METRES
12.2
6.1
6.1
1.62
1.28
1.28
1.28
0.64
0.64
1.28
1.28
1.28
1.62
Slab Deck (Poured in place)
Rear Fascia (Poured in place)
0.2
2.0
Rubber Fender Unit
Fascia
0.45
0.693
2.478
2.478
2.478
2.478
0.693
0.45
1.143
1.143
Pile Cap 0.6 m. × 0.7 m. (Poured in place)
TYPICAL CROSS SECTION AT A-A

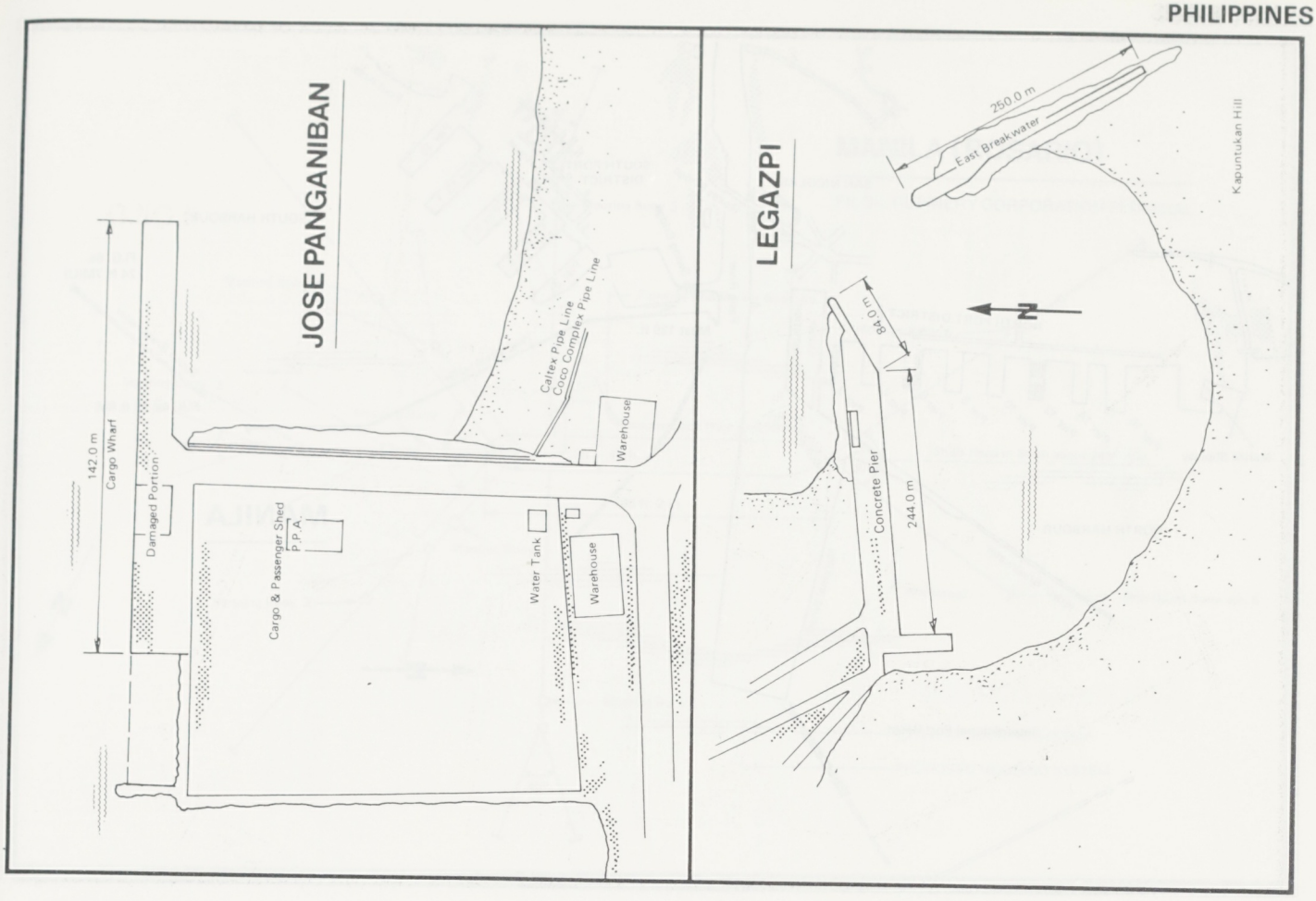

PAKIPUTAN STRAIT
A-A
Concrete Apron 400 m. × 13 m.
Guard House
Warehouse
Warehouse
Warehouse
Seashore
Seashore
Gate
Gate
Gate
Gate
Davao-Agusan National Highway
DAVAO
TEFASCO WHARF
Concrete Quay Wall
Used Rubber Tyres
+3.05 m.
35 m.
0.3 m.
Concrete Pavement
0.00 MLLW Elev.
2 m.
Earthfill
Turnbuckle
Anchor Block
1.55 m.
1.5 m.
3 m.
1.5 m.
Concrete Slab
4 in. × 4 in. Timber
10 m.
4.88 m.
Approx. −9.0 m.
Tubular Pile
SECTION OF TEFASCO WHARF AT A-A

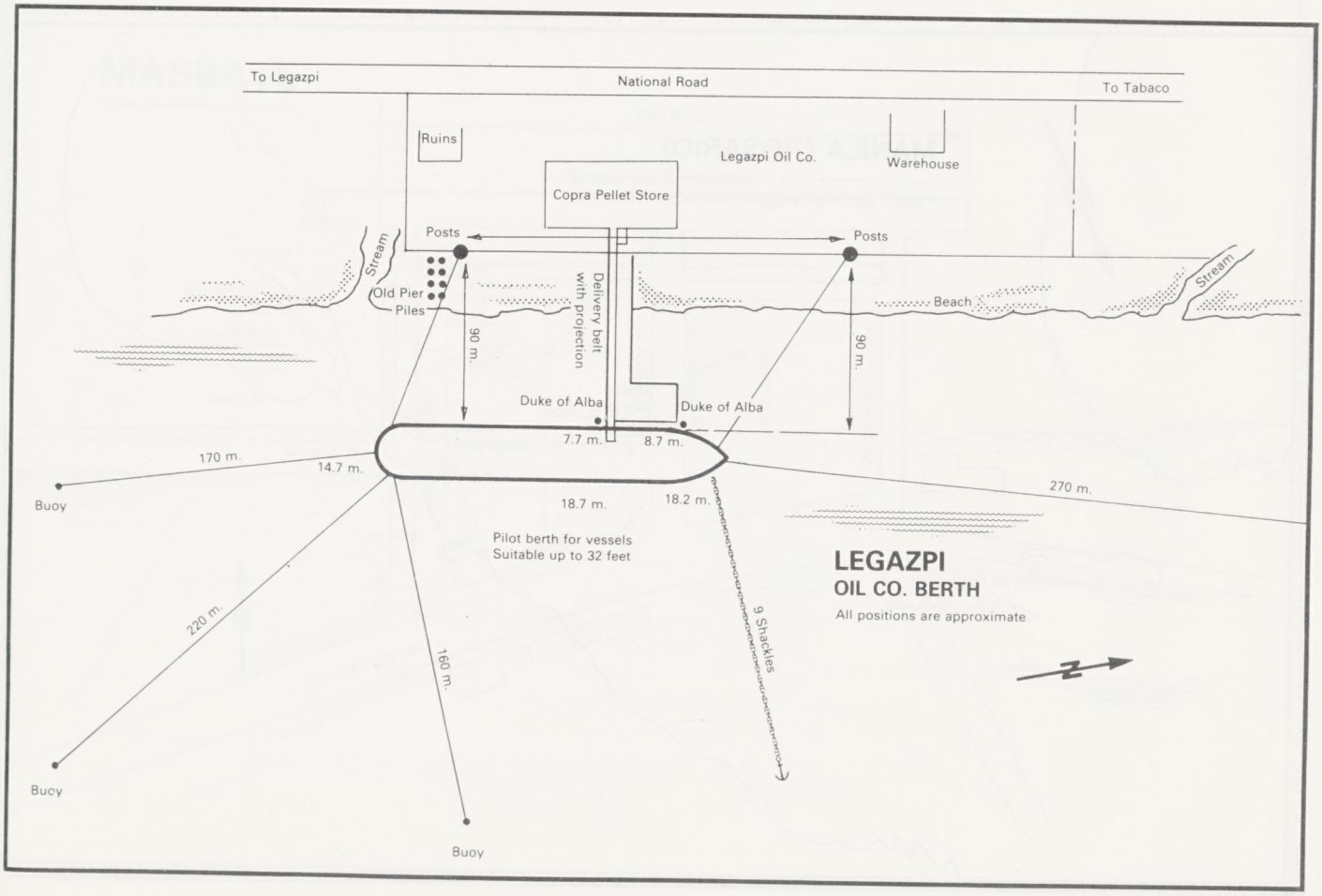

QUINALONG COVE
ILIGAN
COCONUT OIL BERTH
2 Shackles
46 ft. 9 in.
46 ft.
44 ft. 6 in.
L.W.
36 ft.
36 ft. 7 in.
42 ft. 5 in.
42 ft. 4 in.
Shore 'B' Loader & Pipeline

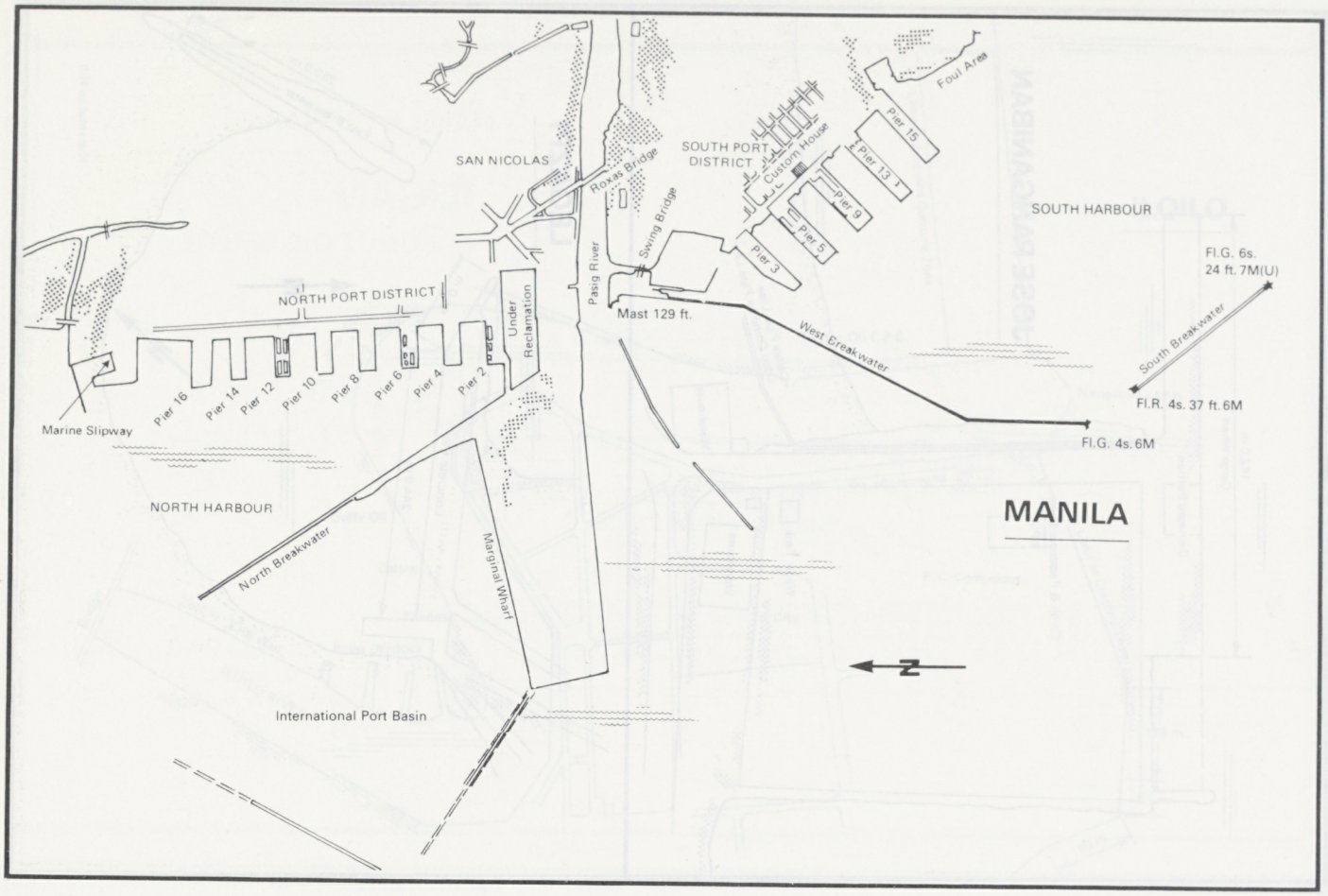

Open Water
Open Water
No. 3 Berth (Deep-sea)
240 metres
Depth 7.62 m.
Depth 5.4 m.
Coastal Berth Length 96 m.
Depth 5.4 m.
Coastal Berth Length 96 m.
ILIGAN

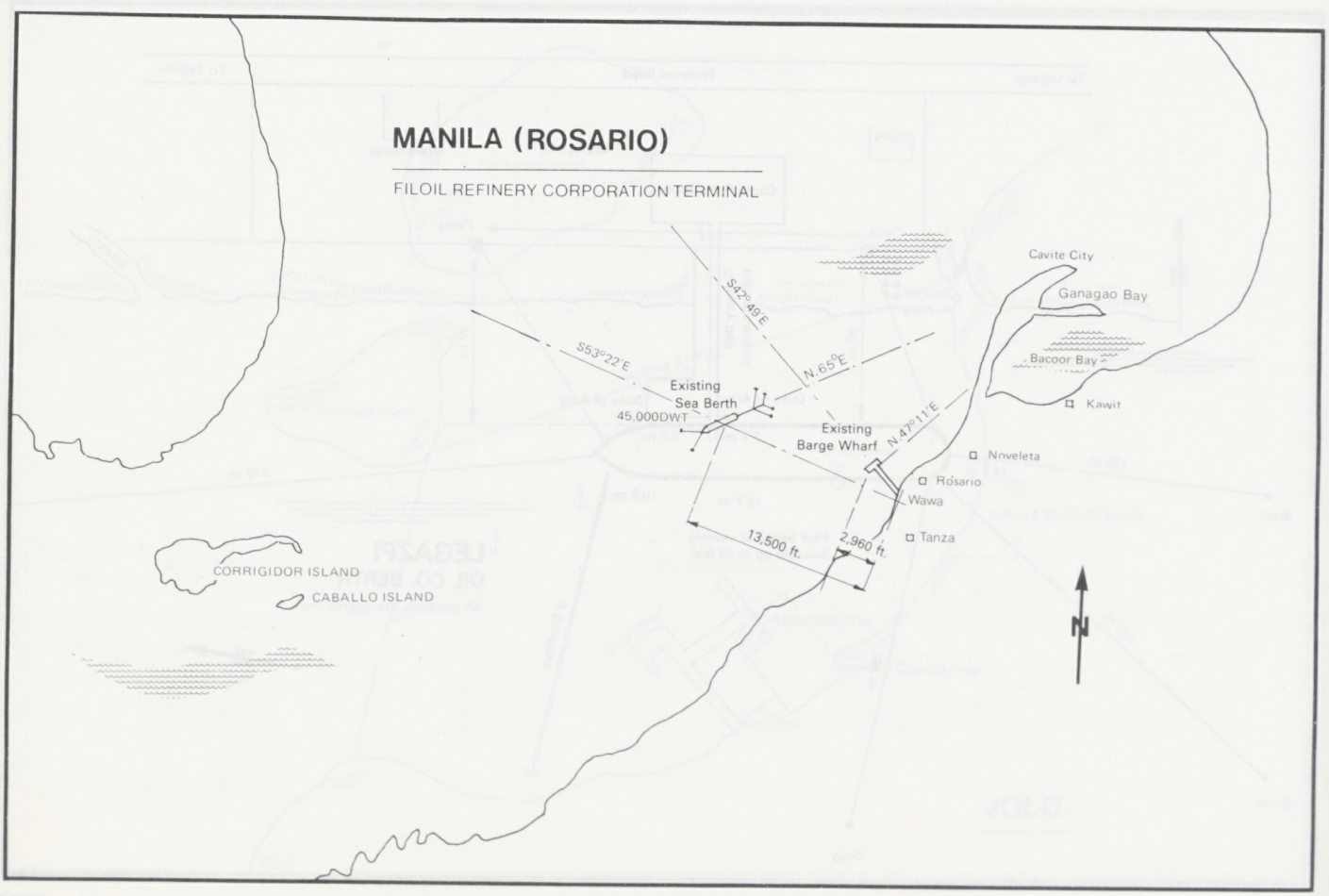

ILOILO
Limit of Proposed Customs Zone
Petron Oil C.P.C.
Navigation Lights
Compound
Getty Oil
Caltex
Phileas
Bridge
CHB Wall
Iloilo Drydock
ILOILO RIVER
City
P. C. Compound
Limit of Customs Zone
176 m.
50 m.
180 m


Pag Asinan Island
Harbour Limit
Marungas Island
Anchorage Areas
Caltex & Mobil Oil Depot
Jolo Wharf
Reclaimed Area
Fenced & Cleared Area
JOLO


JOSE PANGANIBAN
142.0 m
Cargo Wharf
Damaged Portion
Caltex Pipe Line
Coco Complex Pipe Line
Warehouse
Cargo & Passenger Shed
P.P.A.
Water Tank
Warehouse
LEGAZPI
250.0 m
East Breakwater
Kapuntukan Hill
84.0 m
N
Concrete Pier
244.0 m

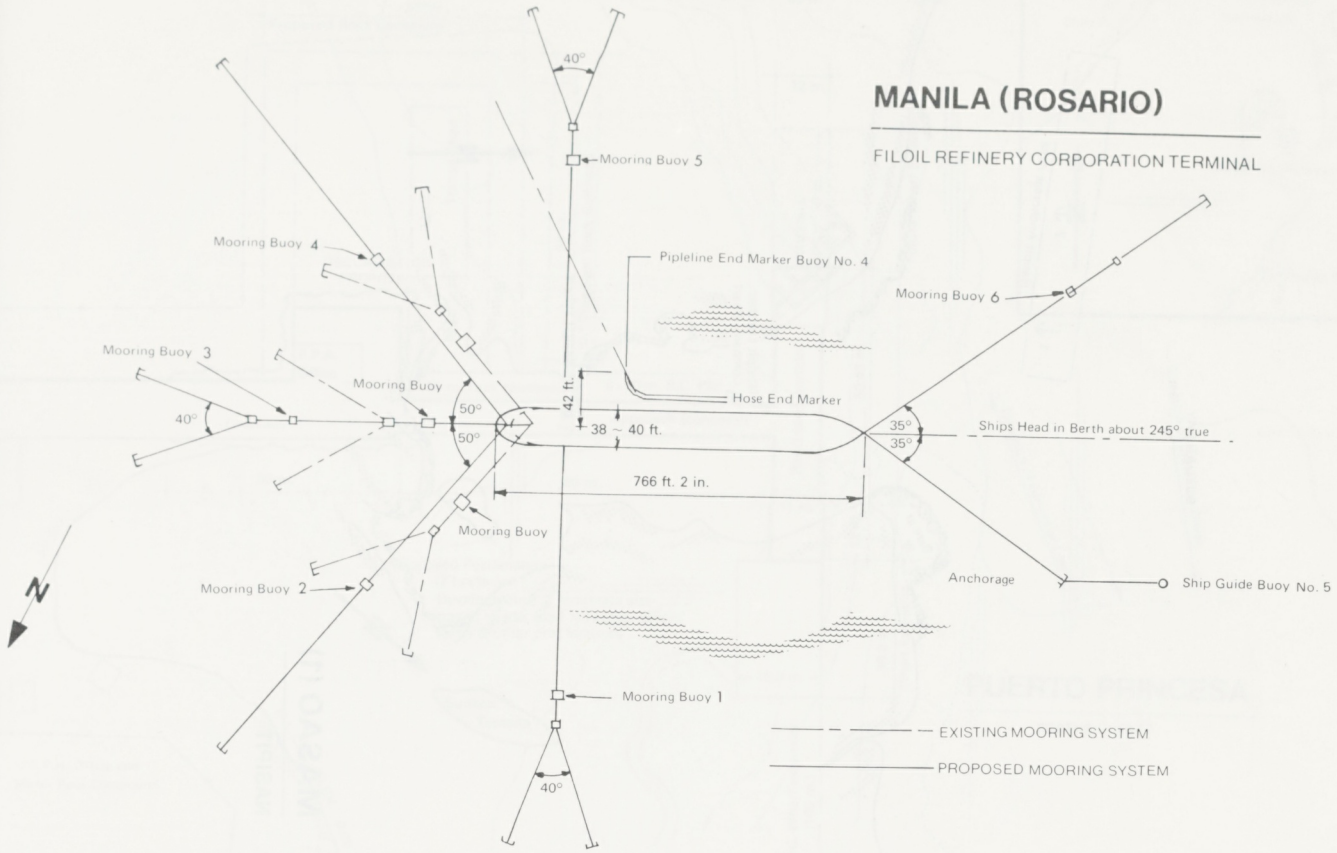

To Legazpi
National Road
To Tabaco
Ruins
Legazpi Oil Co.
Warehouse
Copra Pellet Store
Posts
Posts
Stream
Old Pier
Piles
Delivery belt with projection
Beach
Stream
90 m.
90 m.
Duke of Alba
Duke of Alba
7.7 m.
8.7 m.
170 m.
14.7 m.
270 m.
Buoy
18.7 m.
18.2 m.
Pilot berth for vessels
Suitable up to 32 feet
LEGAZPI
OIL CO. BERTH
All positions are approximate
9 Shackles
N
220 m.
160 m.
Buoy
Buoy


SAN NICOLAS
Roxas Bridge
SOUTH PORT DISTRICT
Custom House
Foul Area
Pier 15
Pier 13
Pier 9
Pier 5
Pier 3
SOUTH HARBOUR
Swing Bridge
Pasig River
Fl.G. 6s.
24 ft. 7M(U)
NORTH PORT DISTRICT
Under Reclamation
Mast 129 ft.
West Breakwater
South Breakwater
Fl.R. 4s. 37 ft. 6M
Fl.G. 4s. 6M
Pier 16
Pier 14
Pier 12
Pier 10
Pier 8
Pier 6
Pier 4
Pier 2
Marine Slipway
NORTH HARBOUR
MANILA
North Breakwater
Marginal Wharf
International Port Basin
N

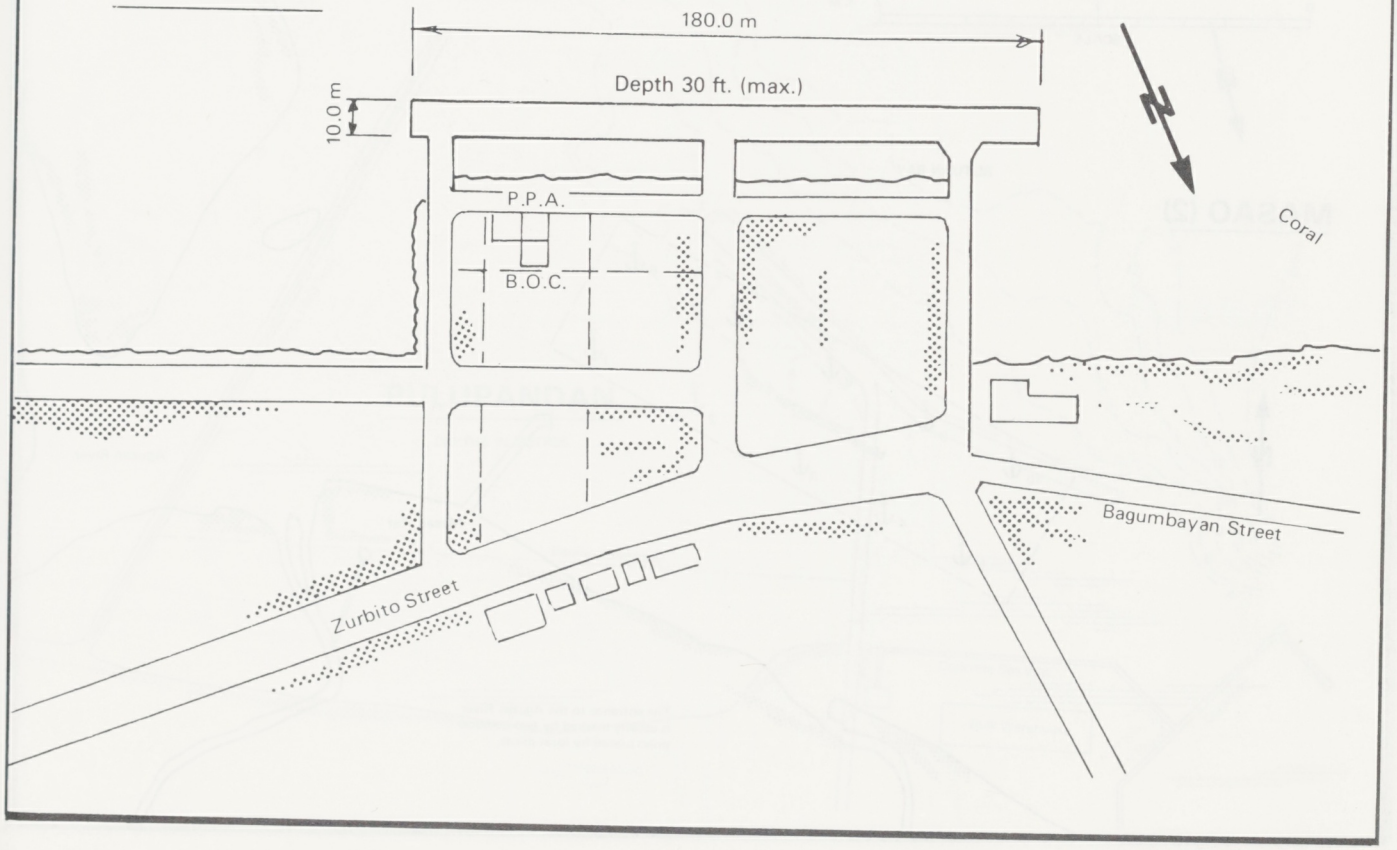

MANILA (ROSARIO)
FILOIL REFINERY CORPORATION TERMINAL
Cavite City
Ganagao Bay
Bacoor Bay
Kawit
S42°49'E
S53°22'E
N.65°E
Existing
Sea Berth
45,000DWT
Existing
Barge Wharf
N.47°11'E
Noveleta
Rosario
Wawa
Tanza
13,500 ft.
2,960 ft.
CORRIGIDOR ISLAND
CABALLO ISLAND
N

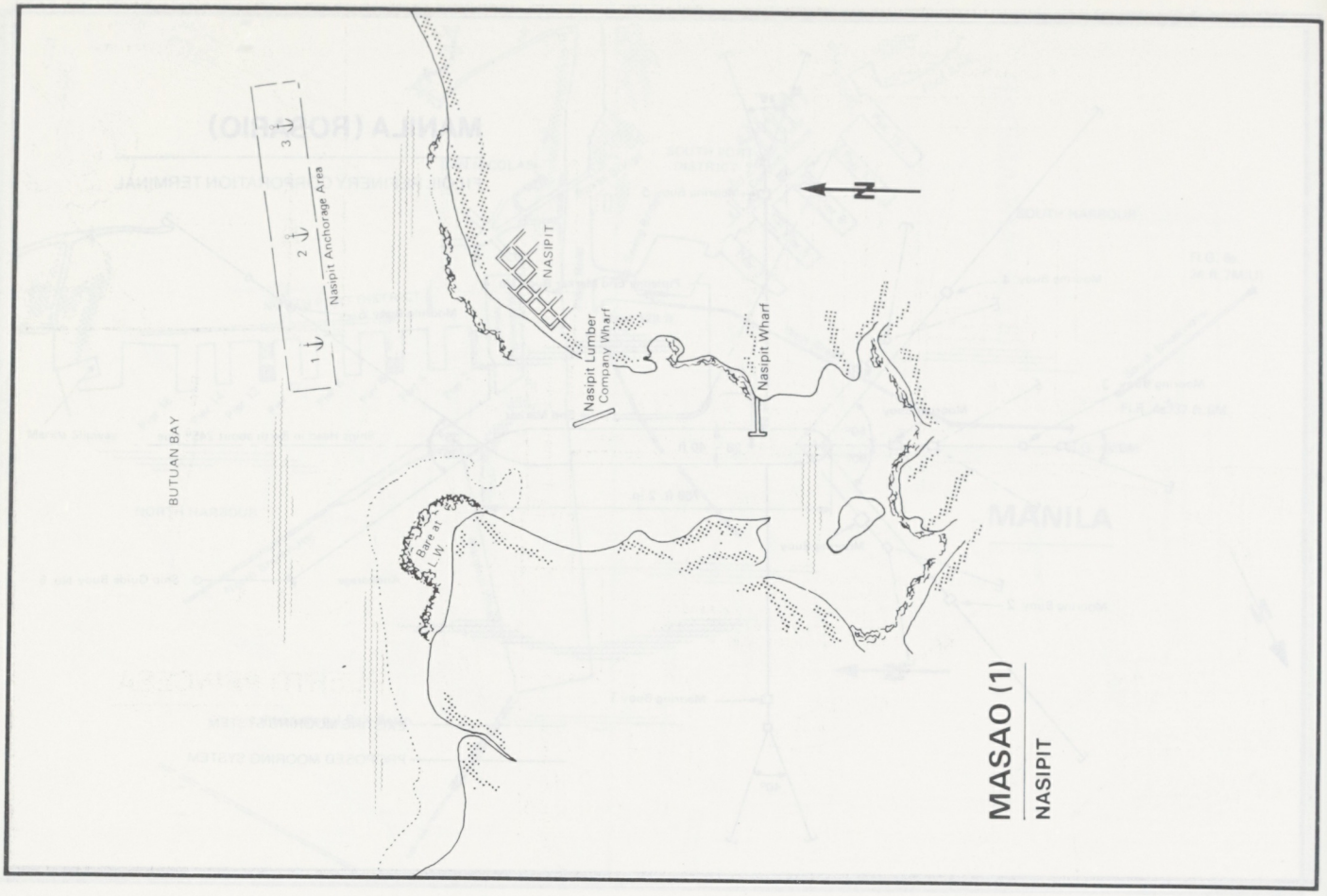
MANILA (ROSARIO)

FILOIL REFINERY CORPORATION TERMINAL



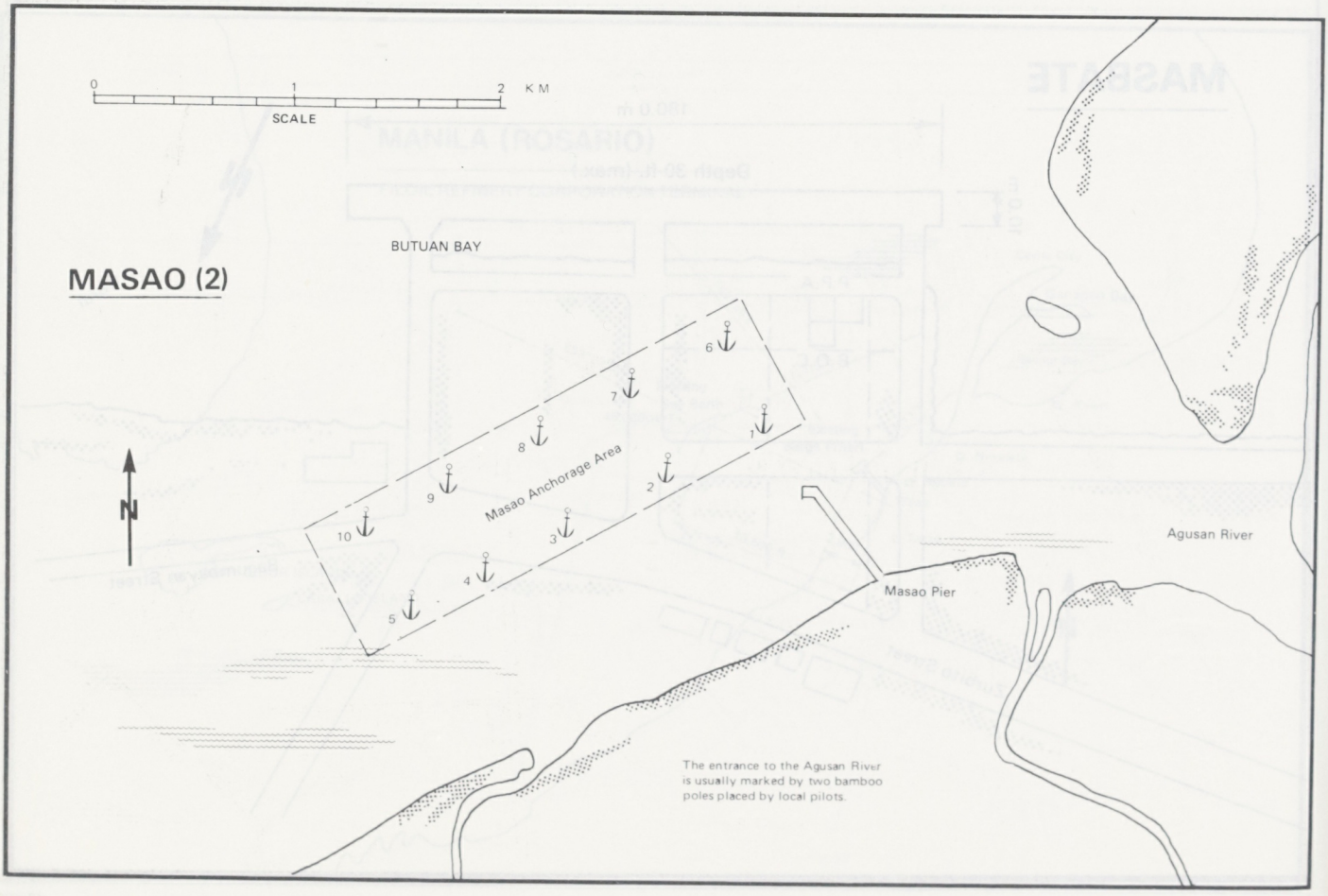
MASBATE



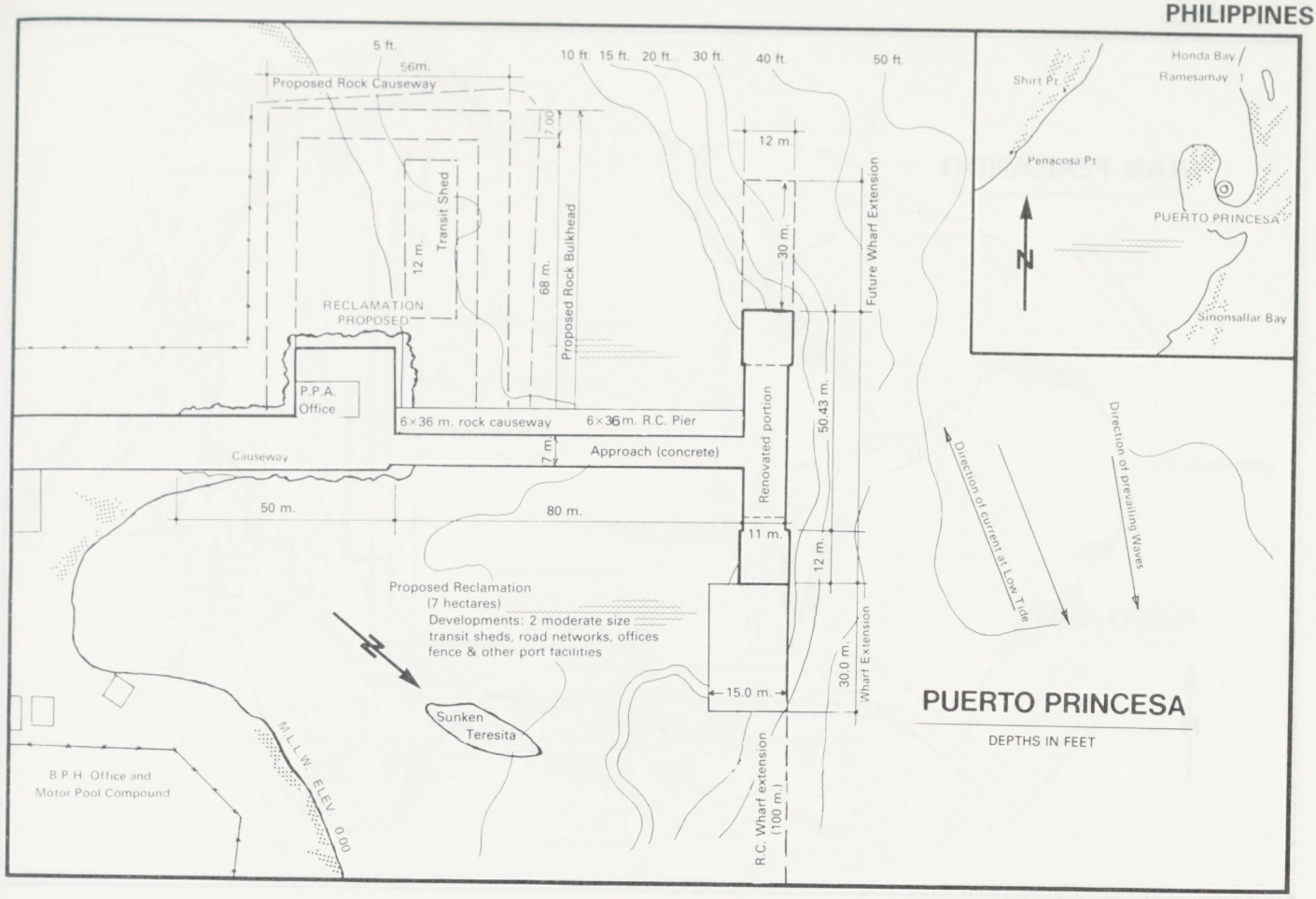


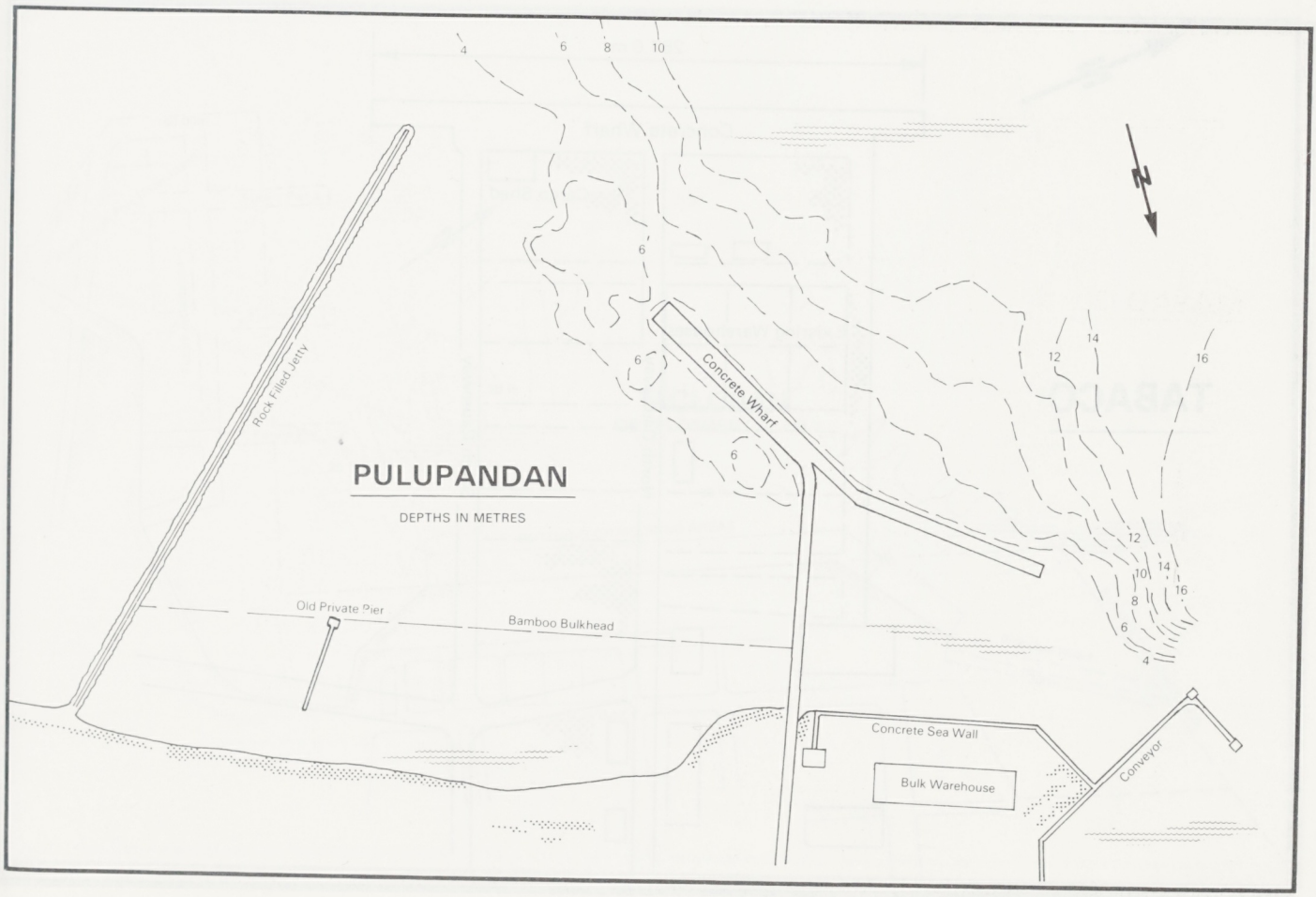
MASAO (1)

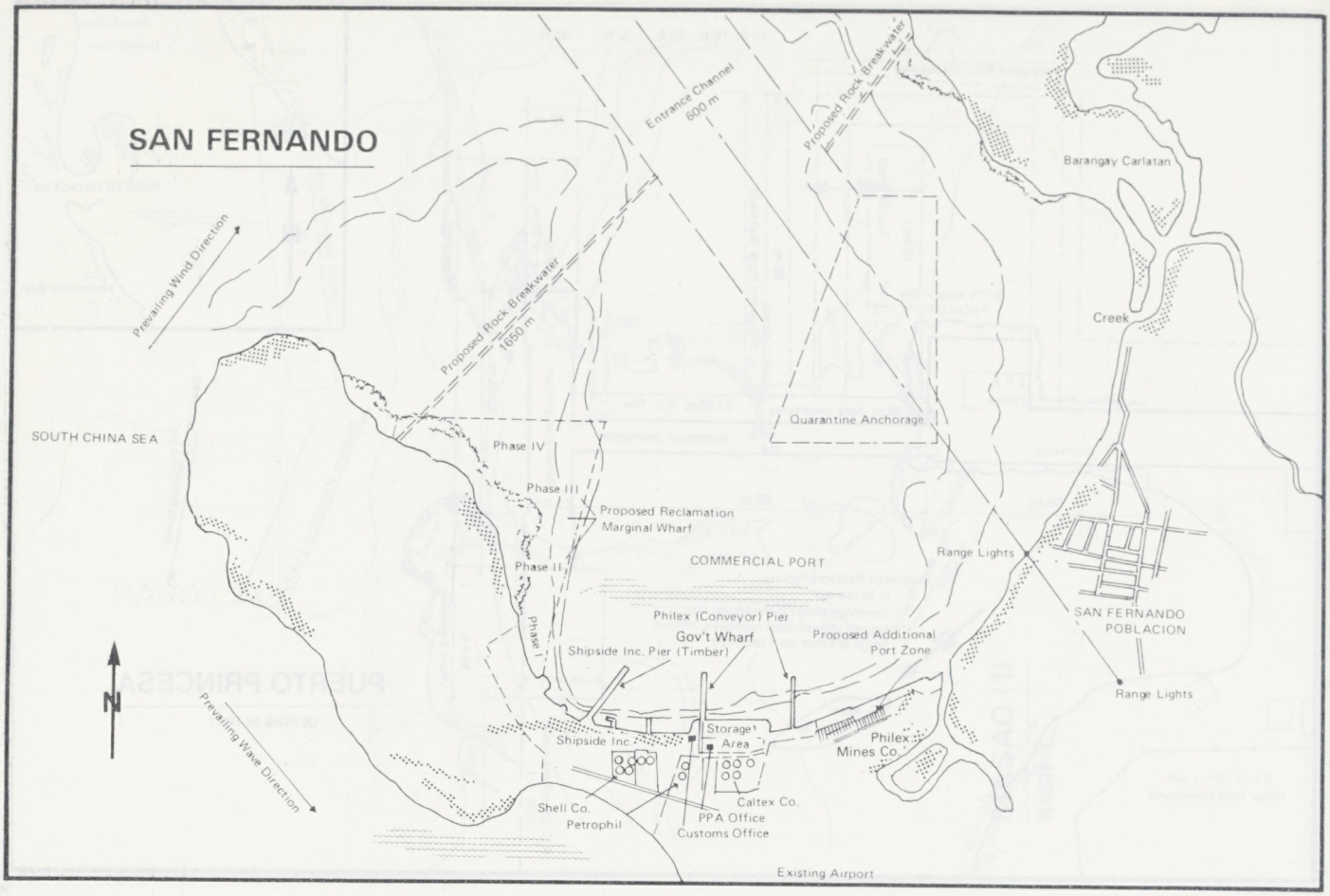
NASIPIT

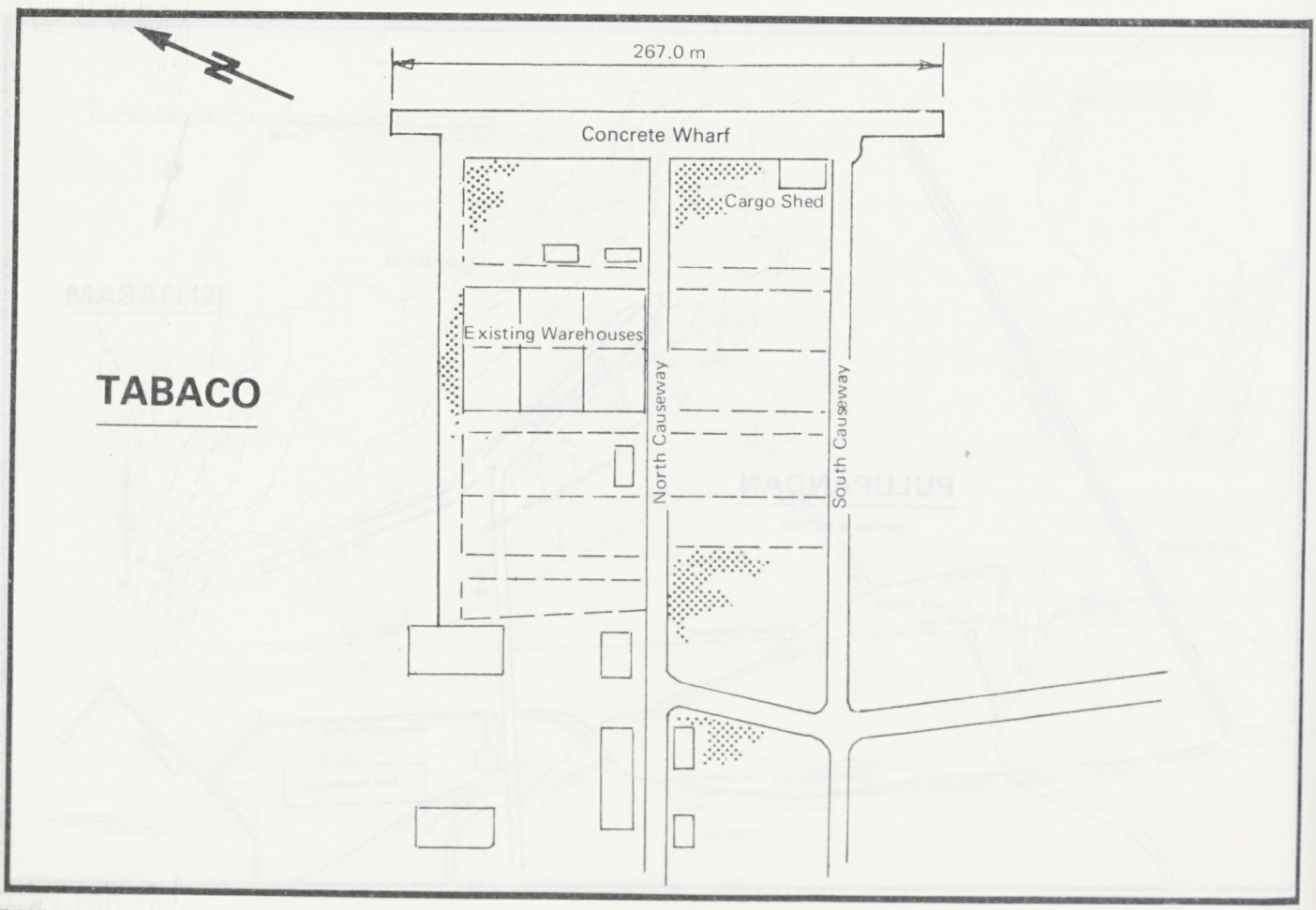


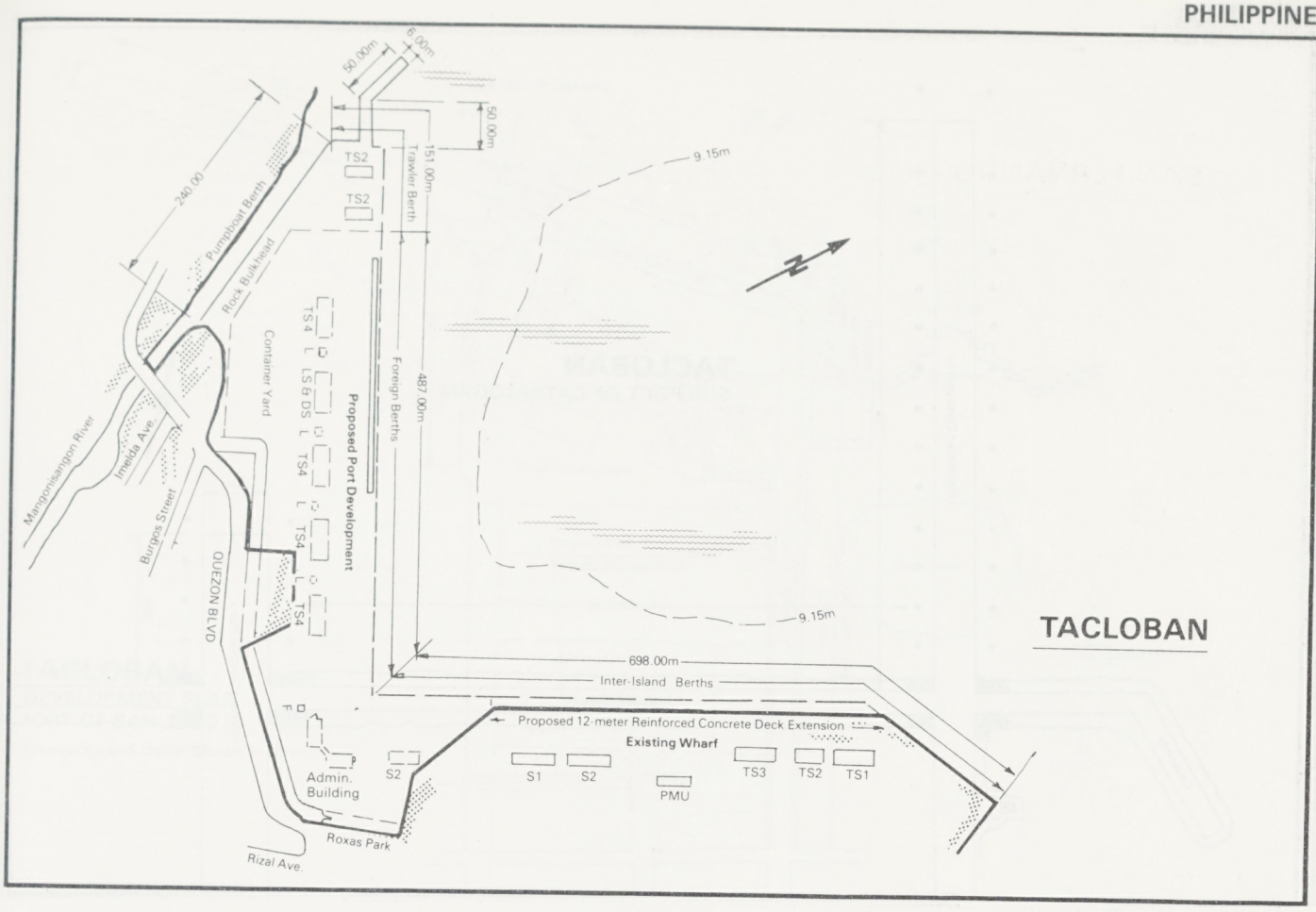
MASAO (2)

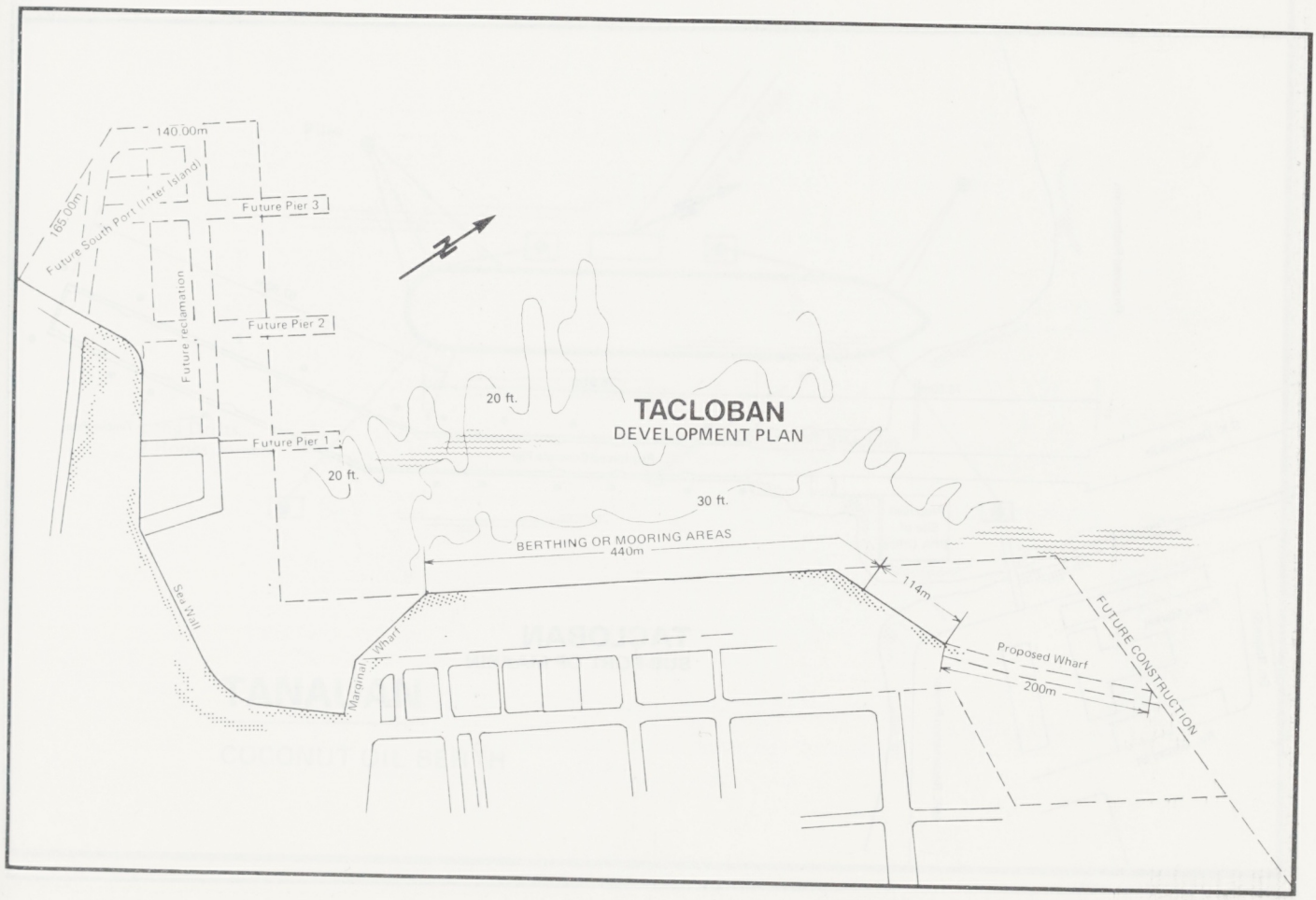

5 ft.
56m.
Proposed Rock Causeway
10 ft. 15 ft. 20 ft. 30 ft. 40 ft. 50 ft.
7.00
12 m.
Transit Shed
12 m.
68 m.
Proposed Rock Bulkhead
30 m.
Future Wharf Extension
RECLAMATION PROPOSED
P.P.A. Office
6×36 m. rock causeway
6×36m. R.C. Pier
7 m.
Approach (concrete)
Causeway
Renovated portion
50.43 m.
50 m.
80 m.
11 m.
12 m.
Proposed Reclamation
(7 hectares)
Developments: 2 moderate size transit sheds, road networks, offices fence & other port facilities
15.0 m.
30.0 m.
Wharf Extension
Sunken Teresita
M.L.L.W. ELEV. 0.00
B.P.H. Office and Motor Pool Compound
R.C. Wharf extension (100 m.)
Direction of current at Low Tide
Direction of prevailing Waves
PUERTO PRINCESA
DEPTHS IN FEET
Honda Bay
Ramesamay I.
Shirt Pt.
Penacosa Pt.
PUERTO PRINCESA
Sinonsallar Bay
N

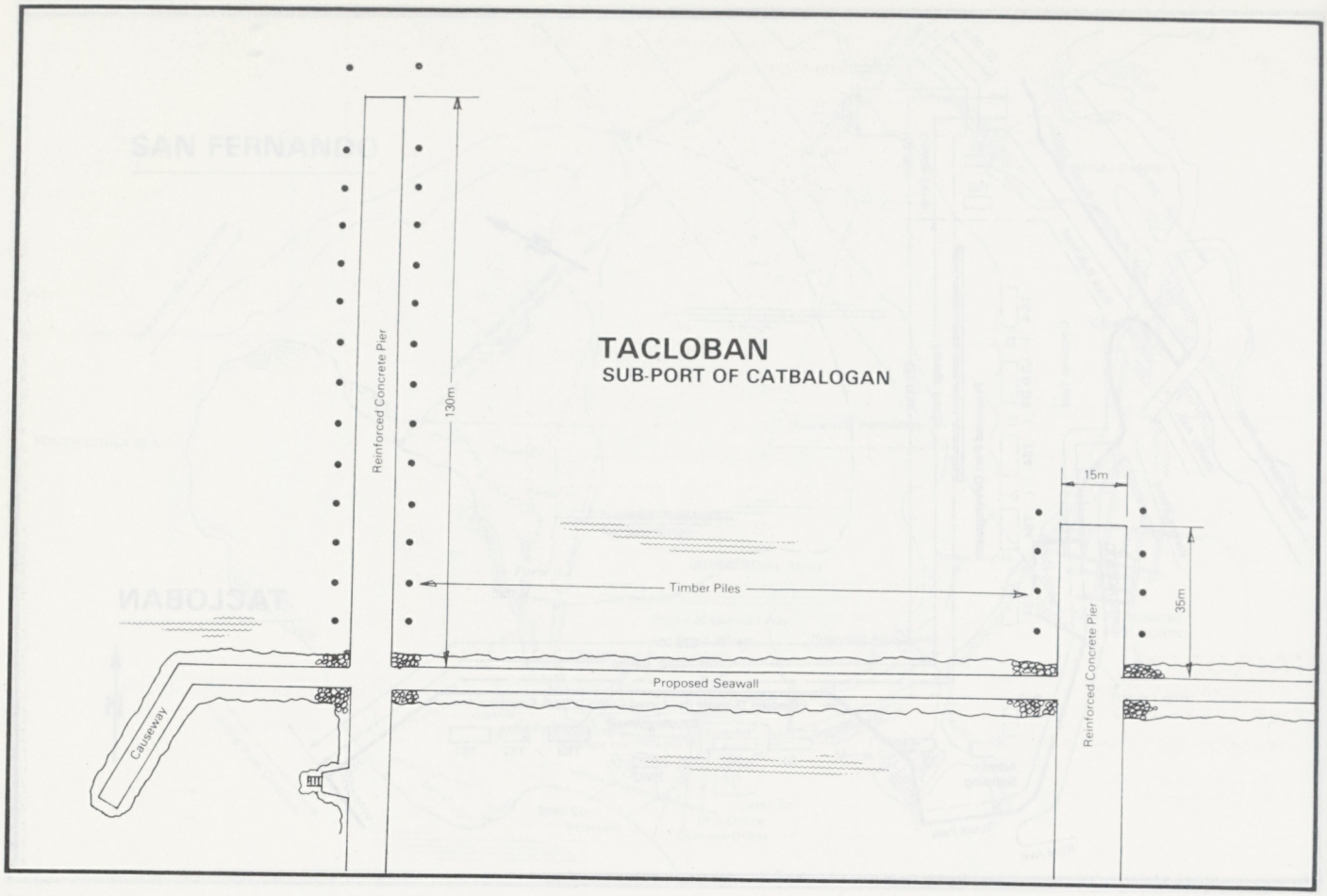

4
6
8
10
6
6
6
Rock Filled Jetty
Concrete Wharf
PULUPANDAN
DEPTHS IN METRES
12
14
16
12
10
14
16
8
6
4
Old Private Pier
Bamboo Bulkhead
Concrete Sea Wall
Bulk Warehouse
Conveyor
N

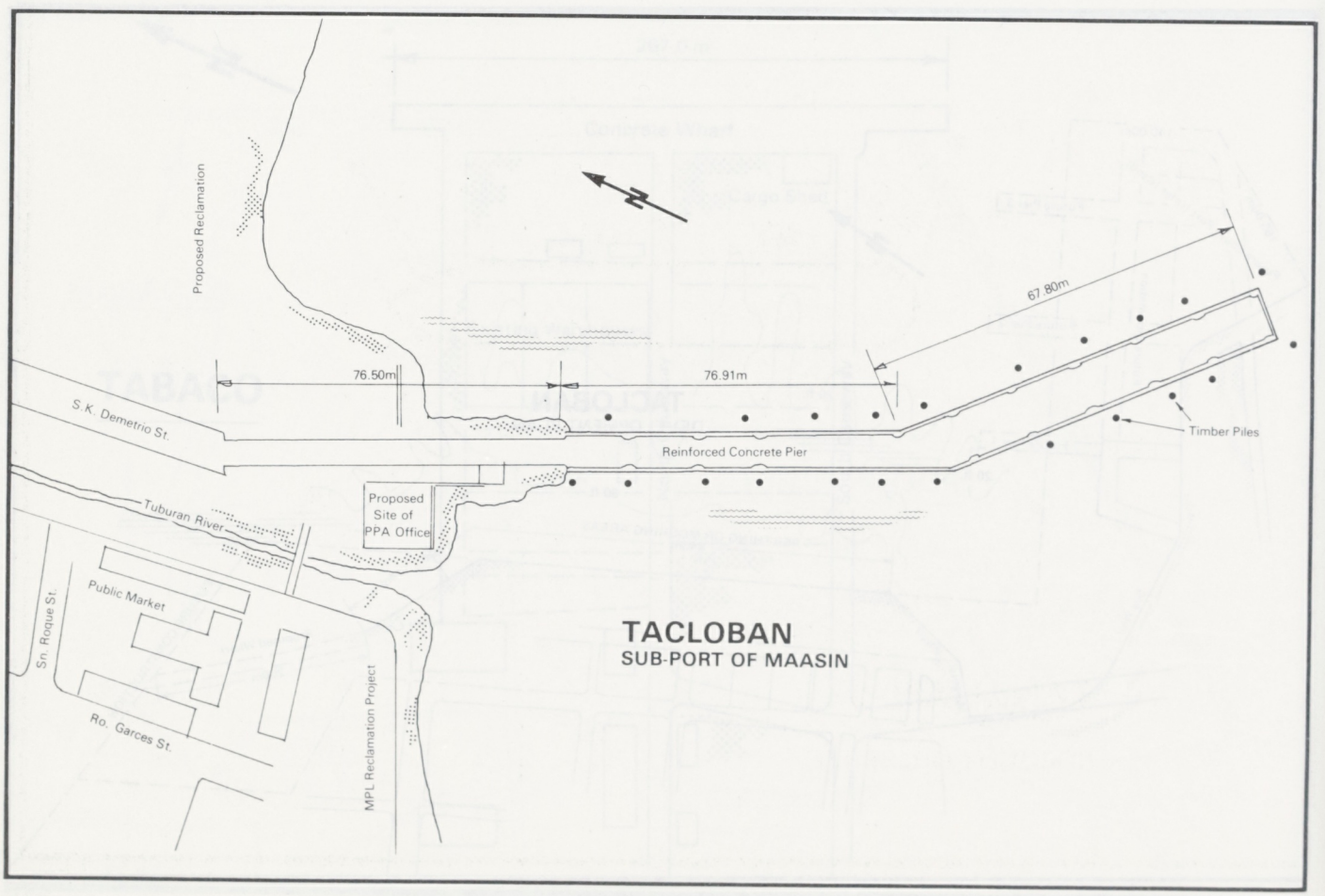

SAN FERNANDO
Entrance Channel 600 m
Proposed Rock Breakwater
Barangay Carlatan
Prevailing Wind Direction
Proposed Rock Breakwater 1650 m
Creek
SOUTH CHINA SEA
Quarantine Anchorage
Phase IV
Phase III
Proposed Reclamation Marginal Wharf
Phase II
COMMERCIAL PORT
Range Lights
SAN FERNANDO POBLACION
Phase I
Philex (Conveyor) Pier
Gov't Wharf
Shipside Inc. Pier (Timber)
Proposed Additional Port Zone
N
Range Lights
Storage Area
Shipside Inc.
Philex Mines Co.
Prevailing Wave Direction
Caltex Co.
Shell Co.
Petrophil
PPA Office
Customs Office
Existing Airport

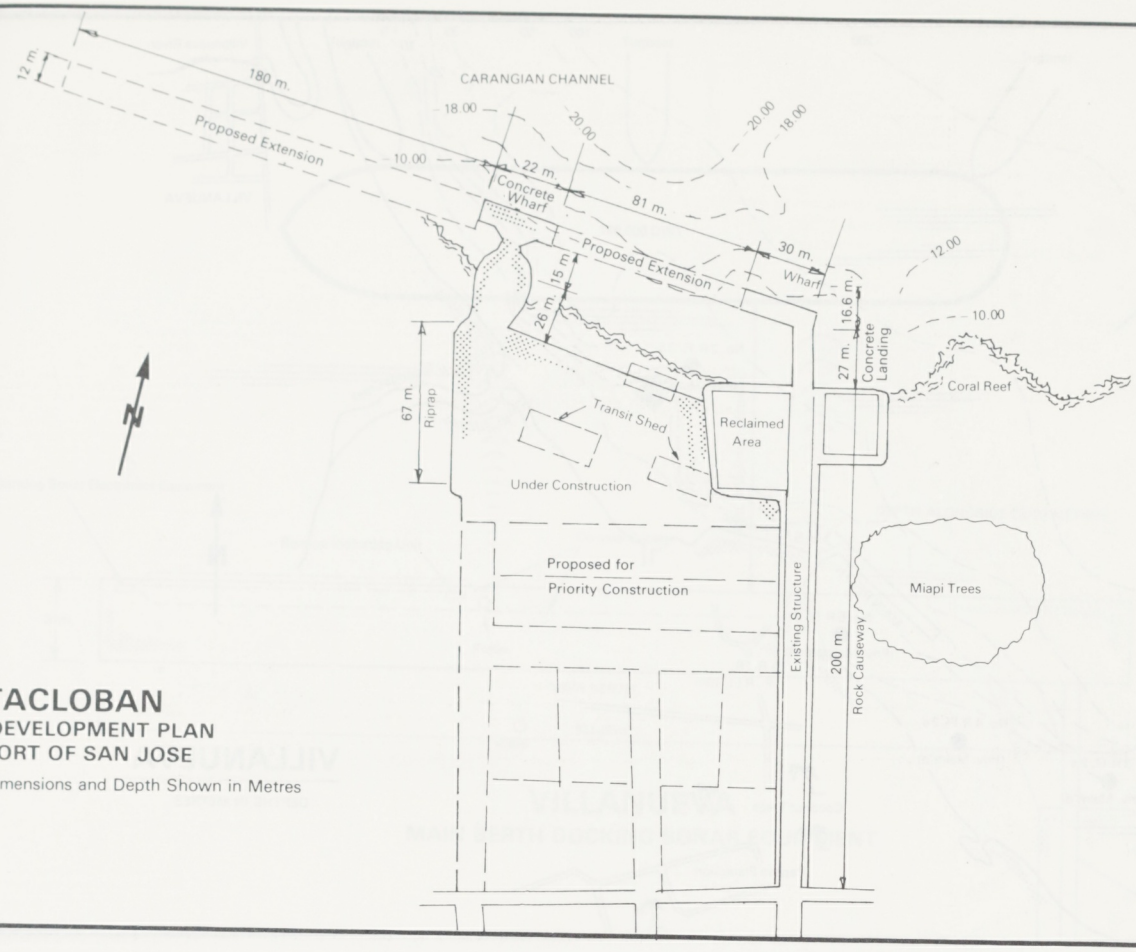

TABACO
267.0 m
Concrete Wharf
Cargo Shed
Existing Warehouses
North Causeway
South Causeway


50.00m
6.00m
50.00m
TS2
TS2
151.00m
Trawler Berth
240.00
Pumpboat Berth
Rock Bulkhead
9.15m
Container Yard
TS4
LS & DS
TS4
TS4
TS4
Proposed Port Development
Foreign Berths
487.00m
Mangonisangon River
Imelda Ave.
Burgos Street
QUEZON BLVD
9.15m
TACLOBAN
698.00m
Inter-Island Berths
Proposed 12-meter Reinforced Concrete Deck Extension
Existing Wharf
Admin. Building
S2
S1
S2
PMU
TS3
TS2
TS1
Roxas Park
Rizal Ave.


140.00m
165.00m
Future South Port (Inter Island)
Future Pier 3
Future reclamation
Future Pier 2
Future Pier 1
20 ft.
TACLOBAN
DEVELOPMENT PLAN
20 ft.
30 ft.
BERTHING OR MOORING AREAS
440m
114m
FUTURE CONSTRUCTION
Proposed Wharf
200m
Marginal Wharf
Sea Wall


TACLOBAN
SUB-PORT OF CATBALOGAN
Reinforced Concrete Pier
130m
15m
Timber Piles
35m
Reinforced Concrete Pier
Proposed Seawall
Causeway

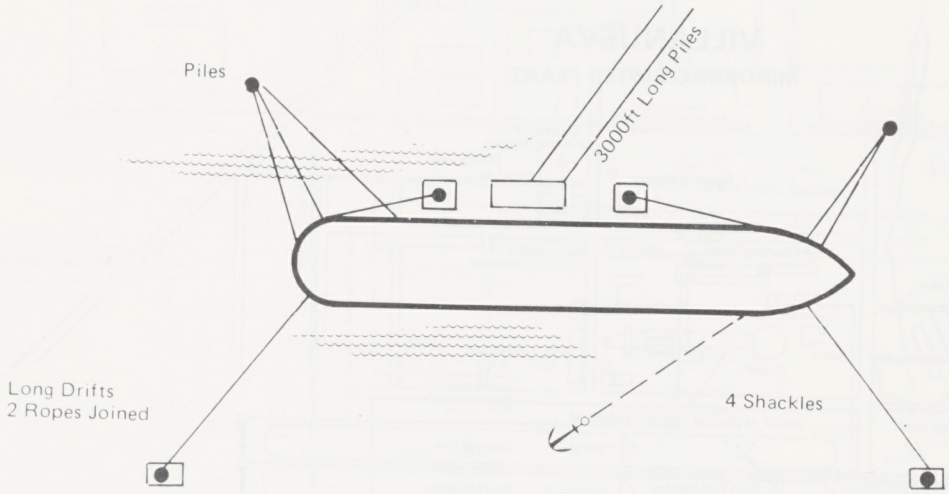

Proposed Reclamation
67.80m
76.50m
76.91m
S.K. Demetrio St.
Reinforced Concrete Pier
Timber Piles
Tuburan River
Proposed Site of PPA Office
Public Market
Sn. Roque St.
Ro. Garces St.
MPL Reclamation Project
TACLOBAN
SUB-PORT OF MAASIN



TACLOBAN

DEVELOPMENT PLAN
PORT OF SAN JOSE

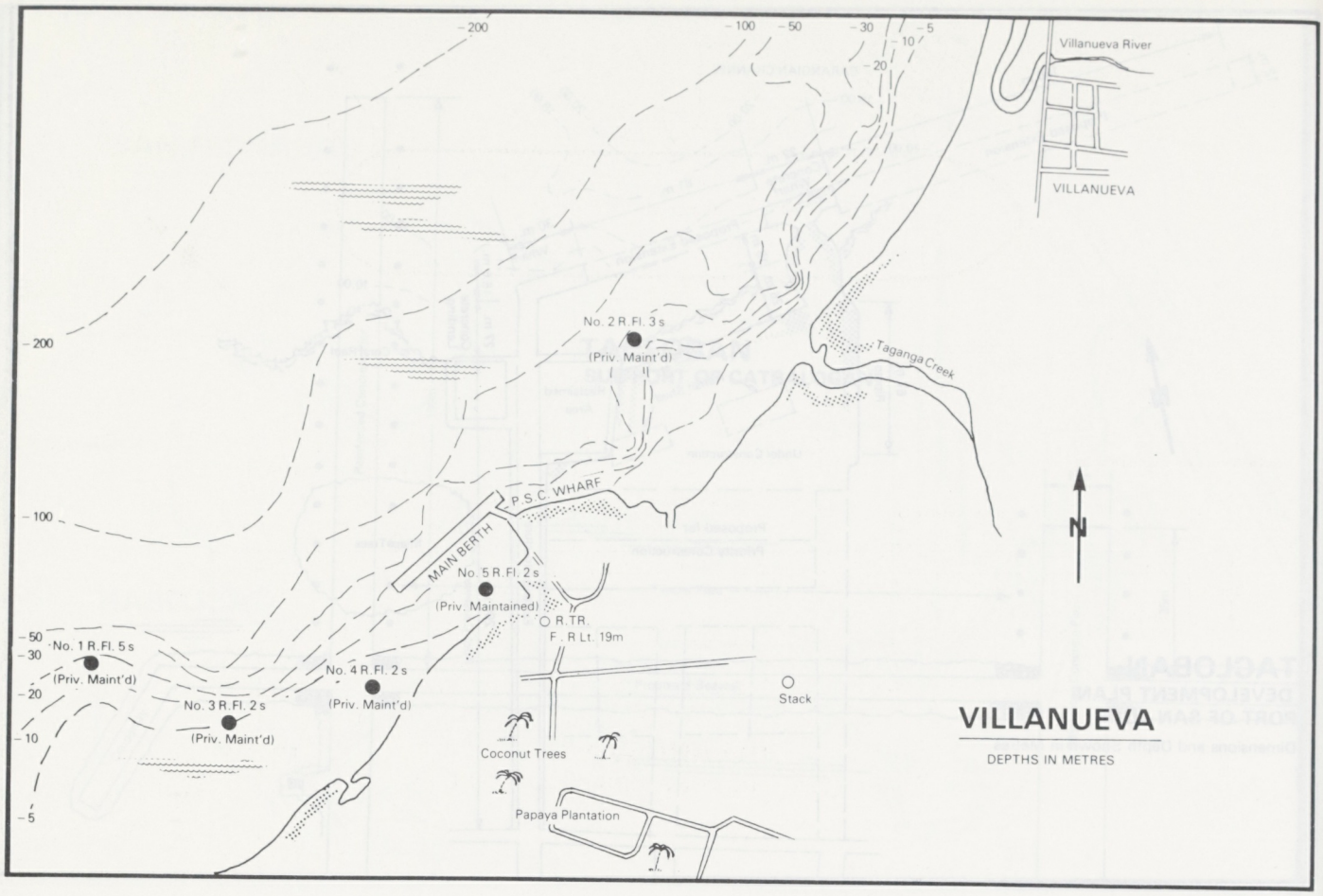
Dimensions and Depth Shown in Metres

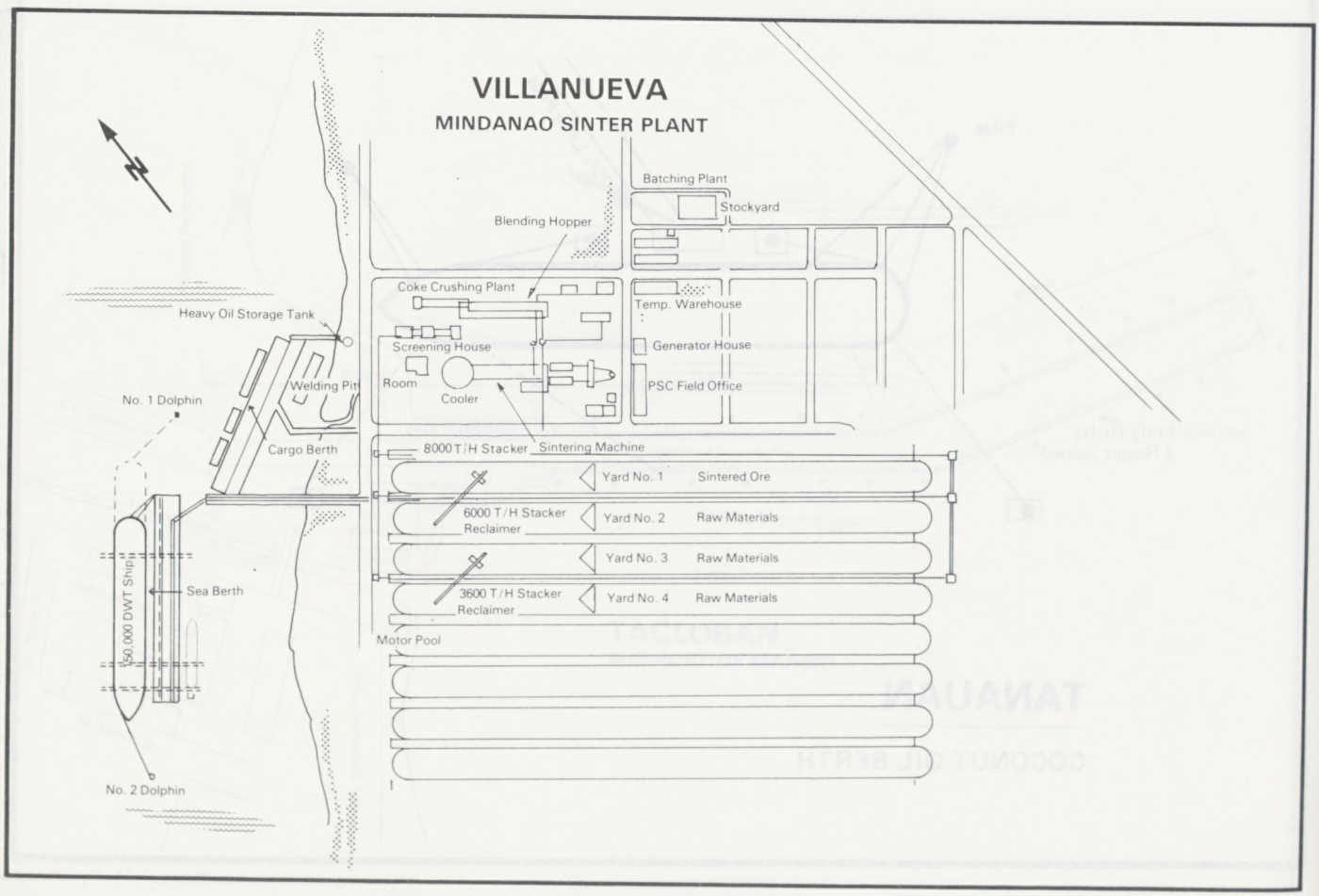


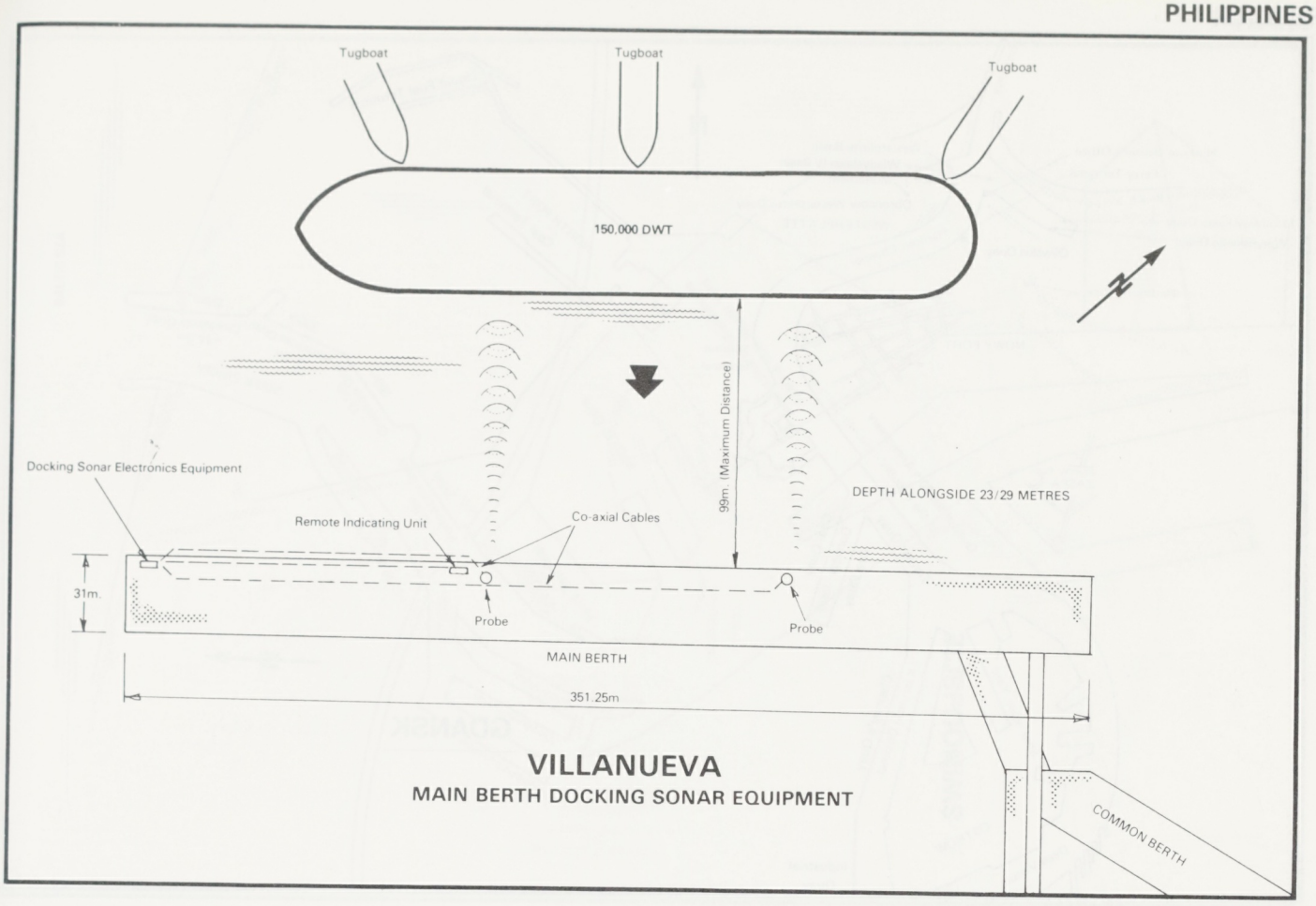
TANAUAN

COCONUT OIL BERTH

"Plan supplied by Ship's Master"

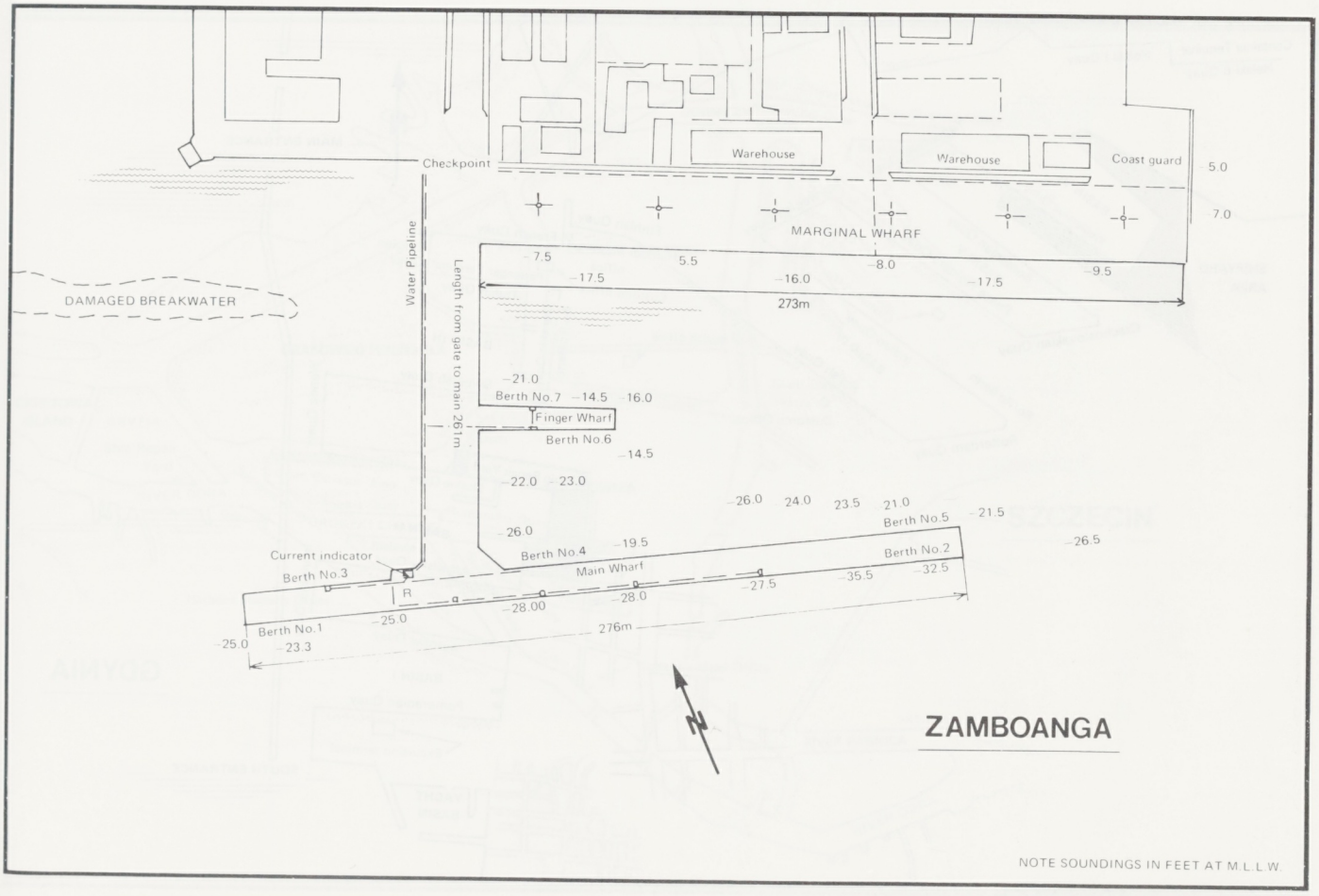

Villanueva River
VILLANUEVA
Taganga Creek
No. 2 R.Fl. 3 s
(Priv. Maint'd)
P.S.C. WHARF
MAIN BERTH
No. 5 R.Fl. 2 s
(Priv. Maintained)
R.TR.
F. R Lt. 19m
No. 1 R.Fl. 5 s
(Priv. Maint'd)
No. 4 R.Fl. 2 s
(Priv. Maint'd)
No. 3 R.Fl. 2 s
(Priv. Maint'd)
Stack
Coconut Trees
Papaya Plantation
N
VILLANUEVA
DEPTHS IN METRES


VILLANUEVA
MINDANAO SINTER PLANT
Batching Plant
Stockyard
Blending Hopper
Coke Crushing Plant
Temp. Warehouse
Heavy Oil Storage Tank
Screening House
Generator House
Welding Pit
Room
Cooler
PSC Field Office
No. 1 Dolphin
Cargo Berth
8000 T/H Stacker
Sintering Machine
Yard No. 1
Sintered Ore
6000 T/H Stacker
Reclaimer
Yard No. 2
Raw Materials
Yard No. 3
Raw Materials
3600 T/H Stacker
Reclaimer
Yard No. 4
Raw Materials
Sea Berth
50,000 DWT Ship
Motor Pool
No. 2 Dolphin



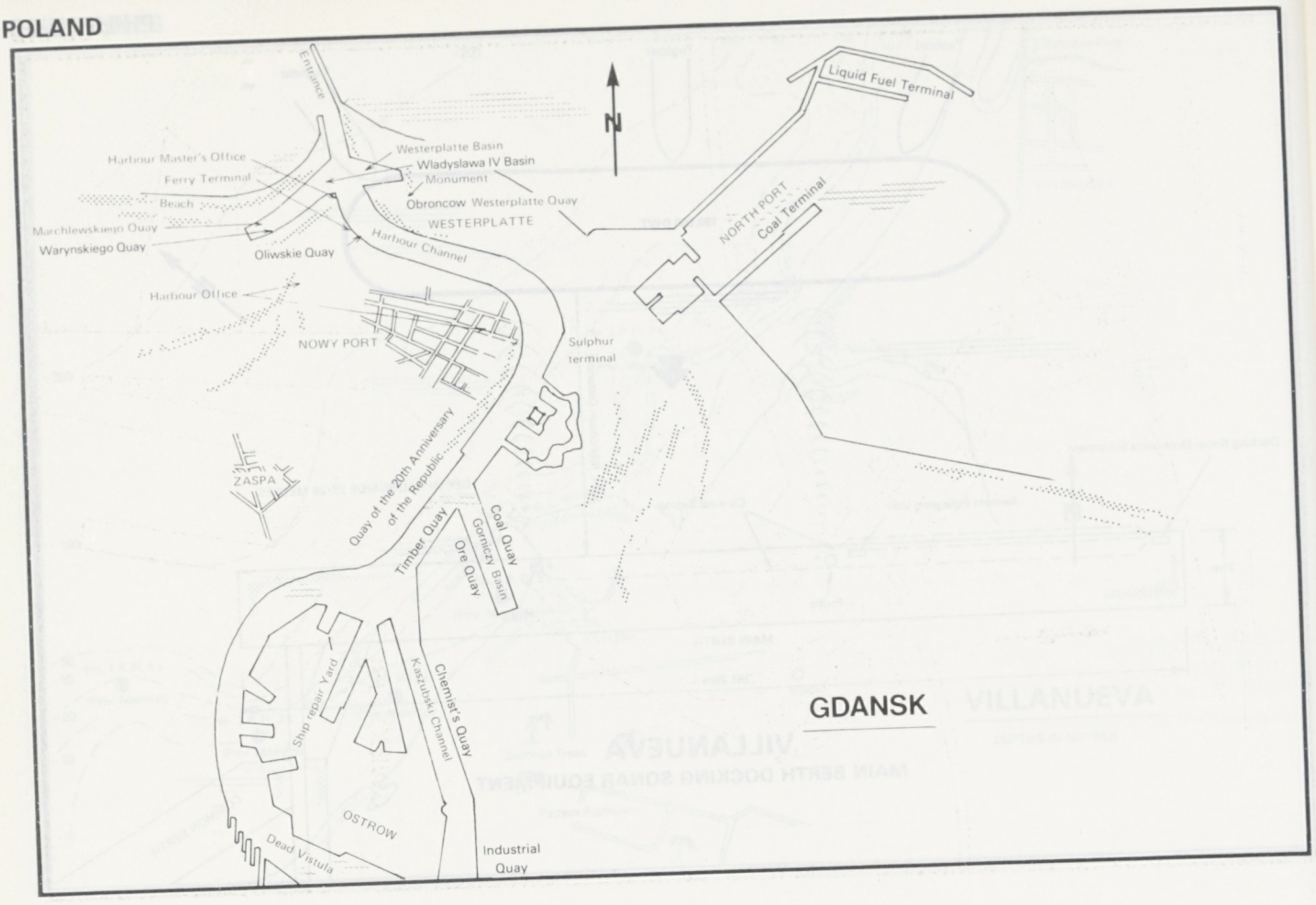
VILLANUEVA

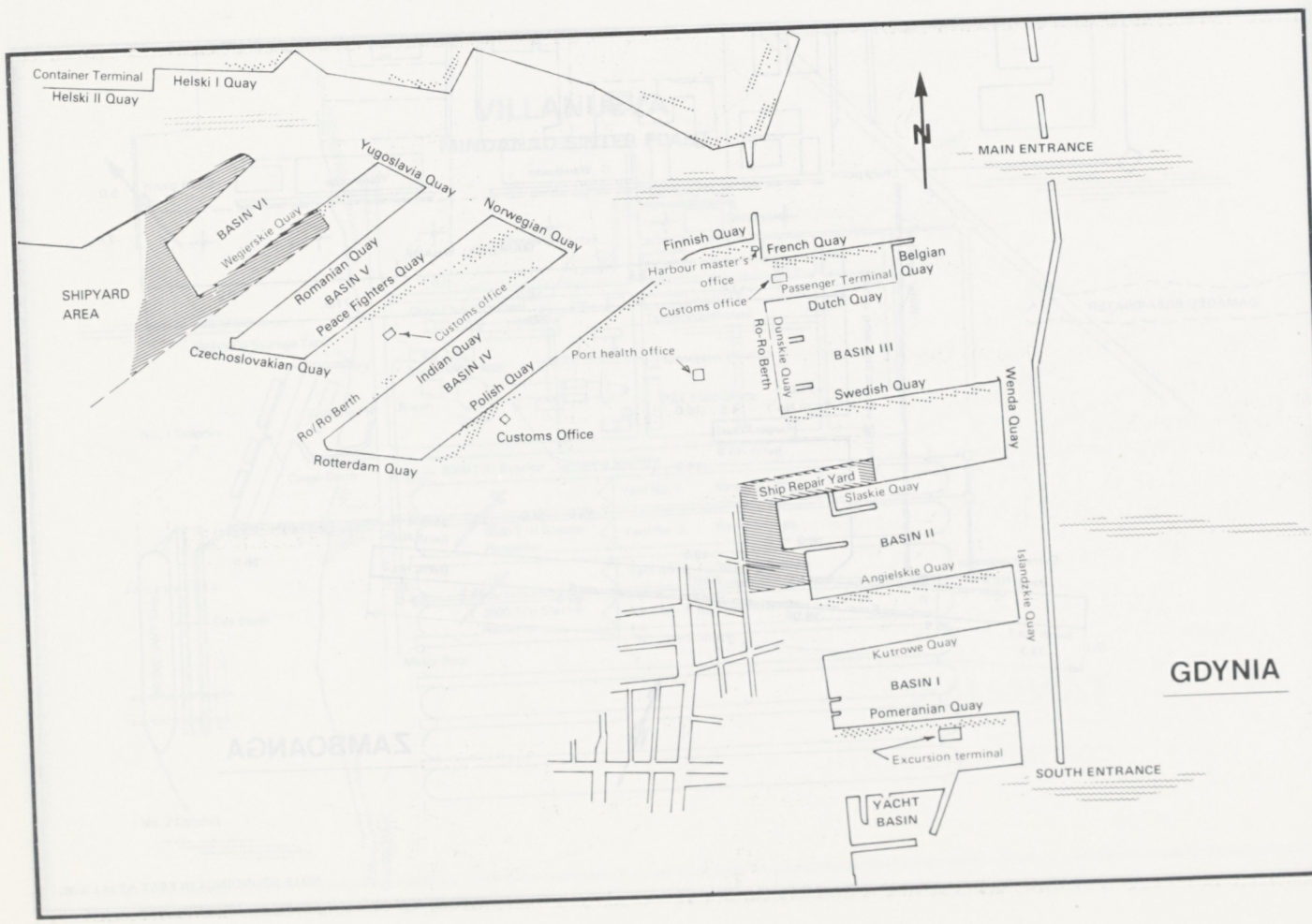
MAIN BERTH DOCKING SONAR EQUIPMENT

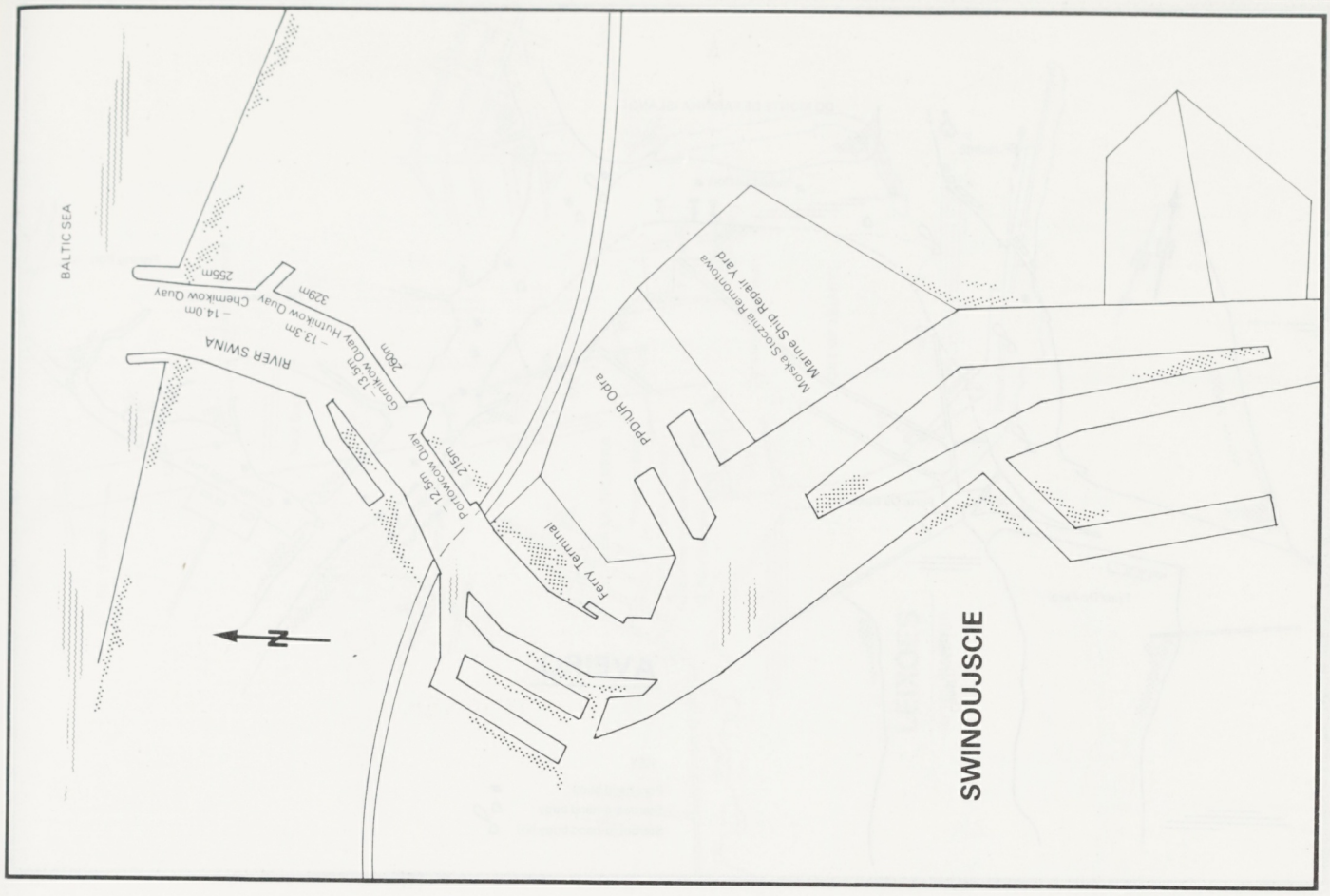


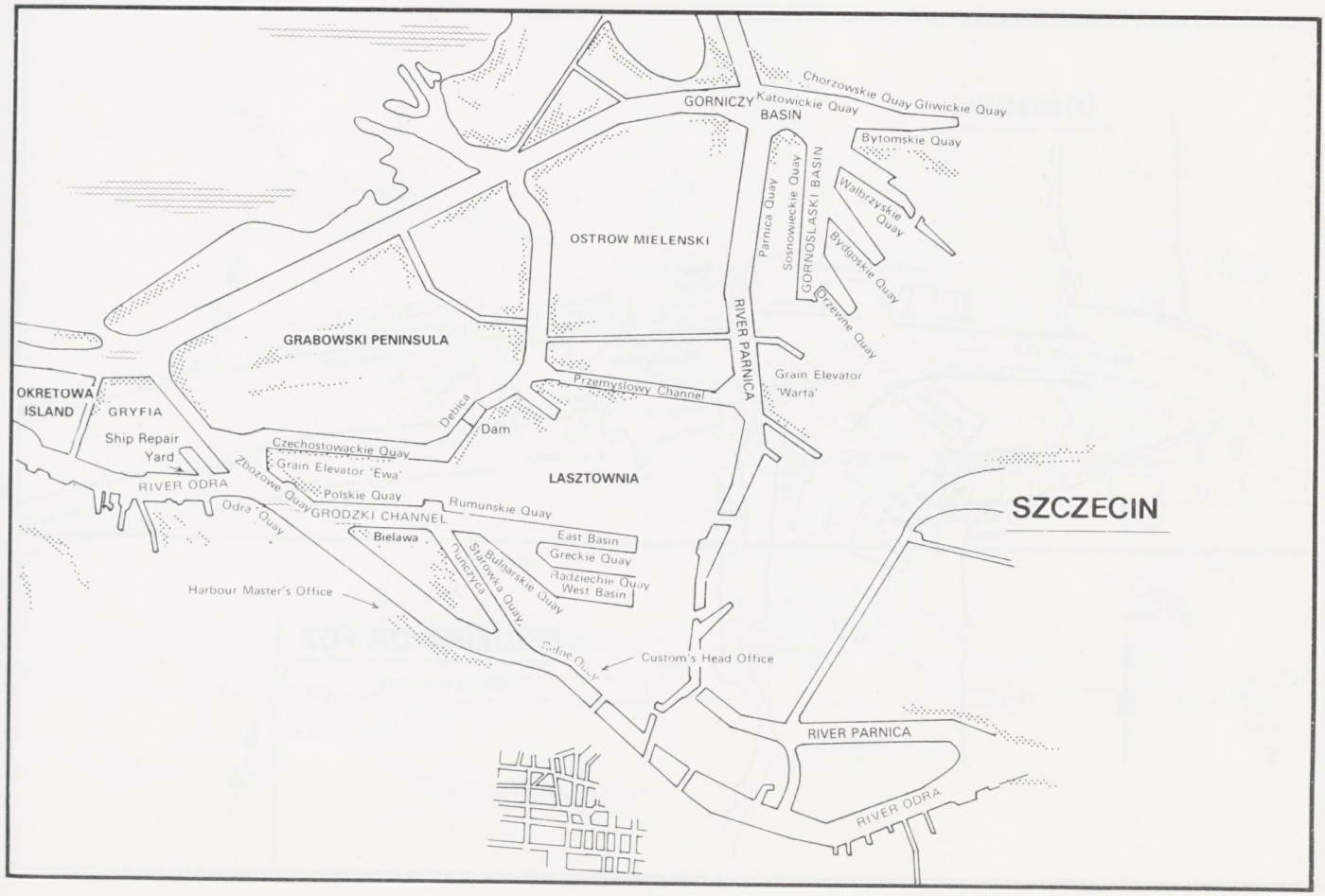
ZAMBOANGA

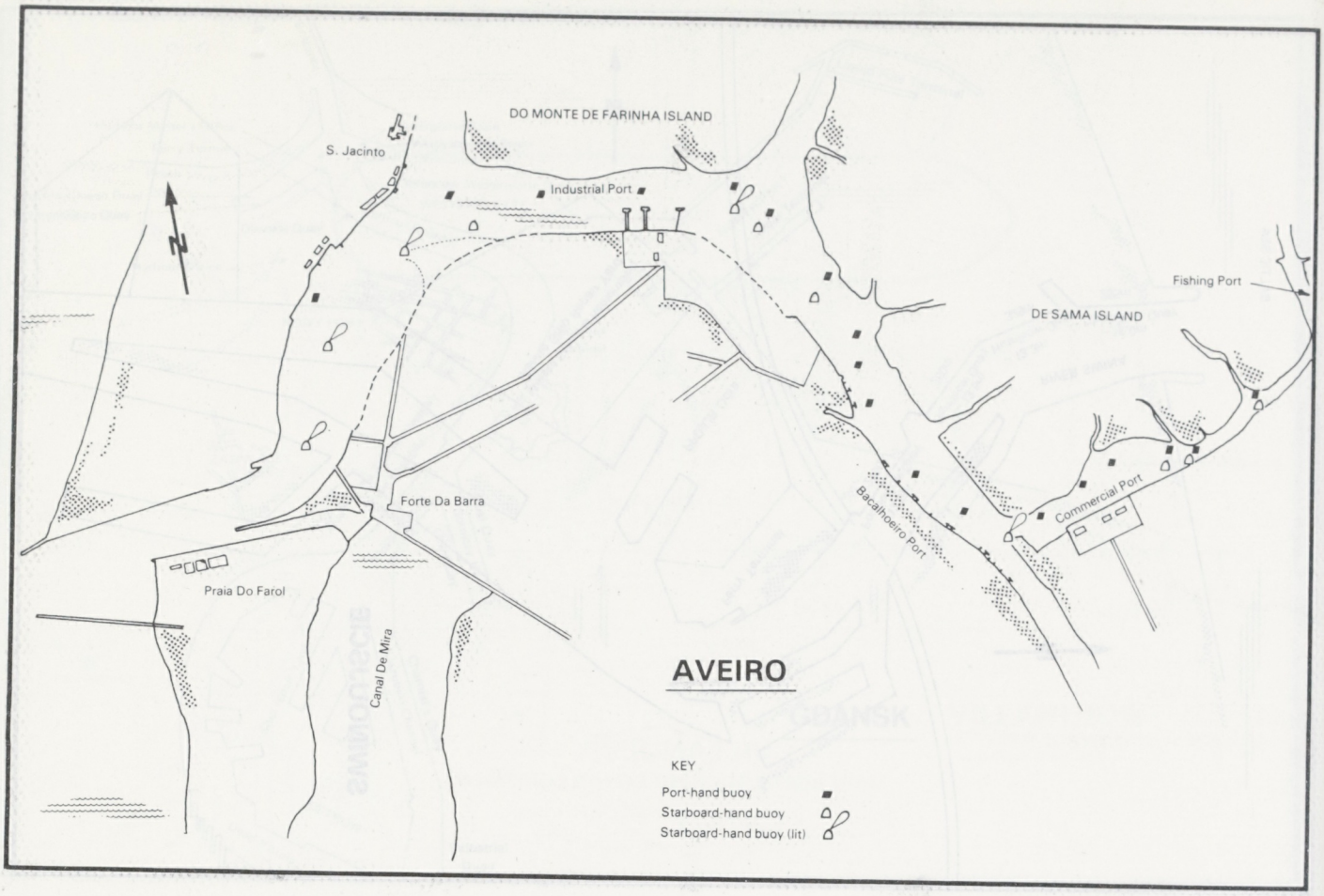
NOTE SOUNDINGS IN FEET AT M.L.L.W.

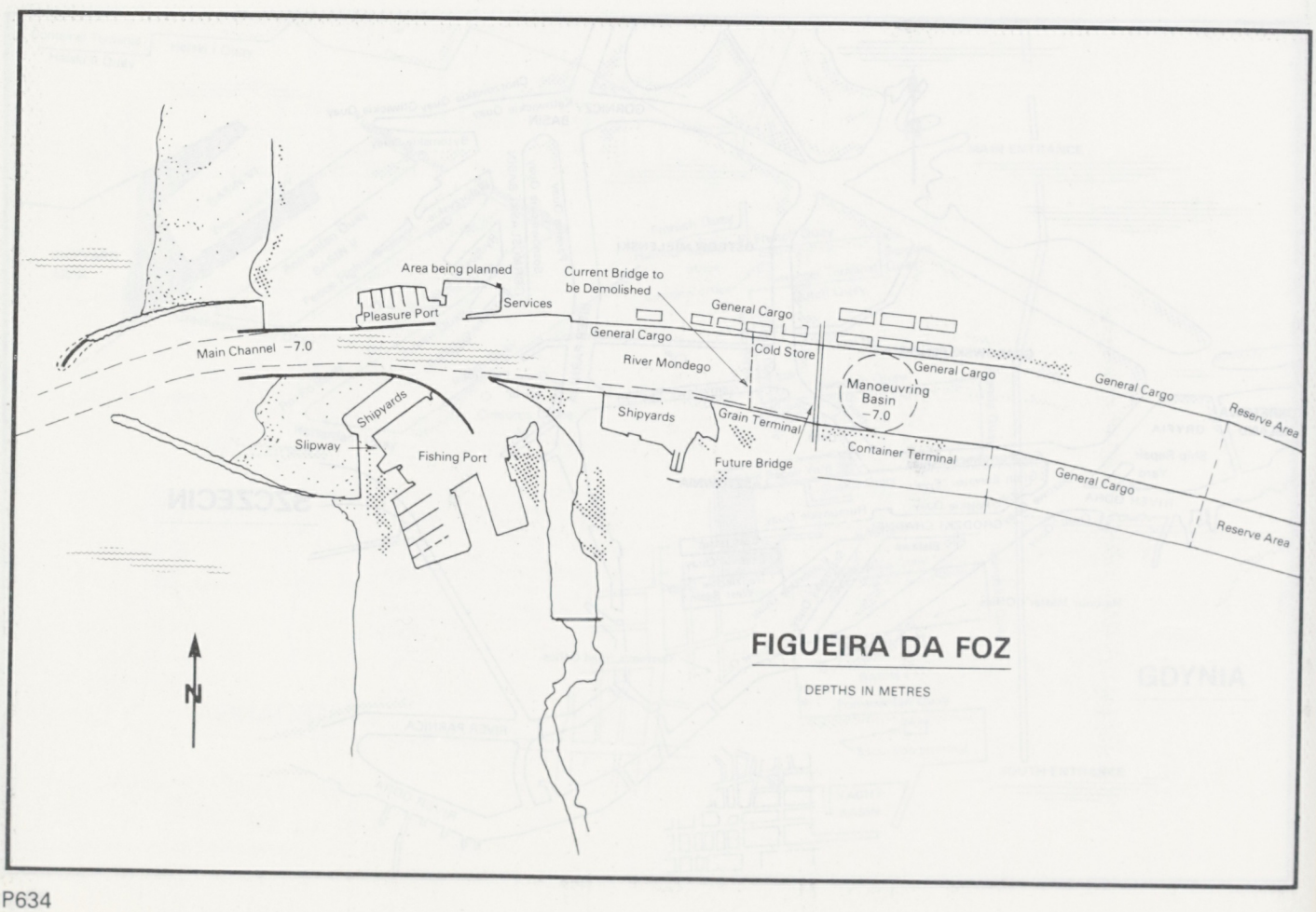

Entrance
Liquid Fuel Terminal
Harbour Master's Office
Ferry Terminal
Beach
Marchlewskiego Quay
Warynskiego Quay
Oliwskie Quay
Westerplatte Basin
Wladyslawa IV Basin
Monument
Obroncow Westerplatte Quay
WESTERPLATTE
Harbour Channel
NORTH PORT
Coal Terminal
Harbour Office
NOWY PORT
Sulphur terminal
ZASPA
Quay of the 20th Anniversary of the Republic
Timber Quay
Ore Quay
Gorniczy Basin
Coal Quay
Ship repair Yard
Kaszubski Channel
Chemist's Quay
OSTROW
Dead Vistula
Industrial Quay
GDANSK

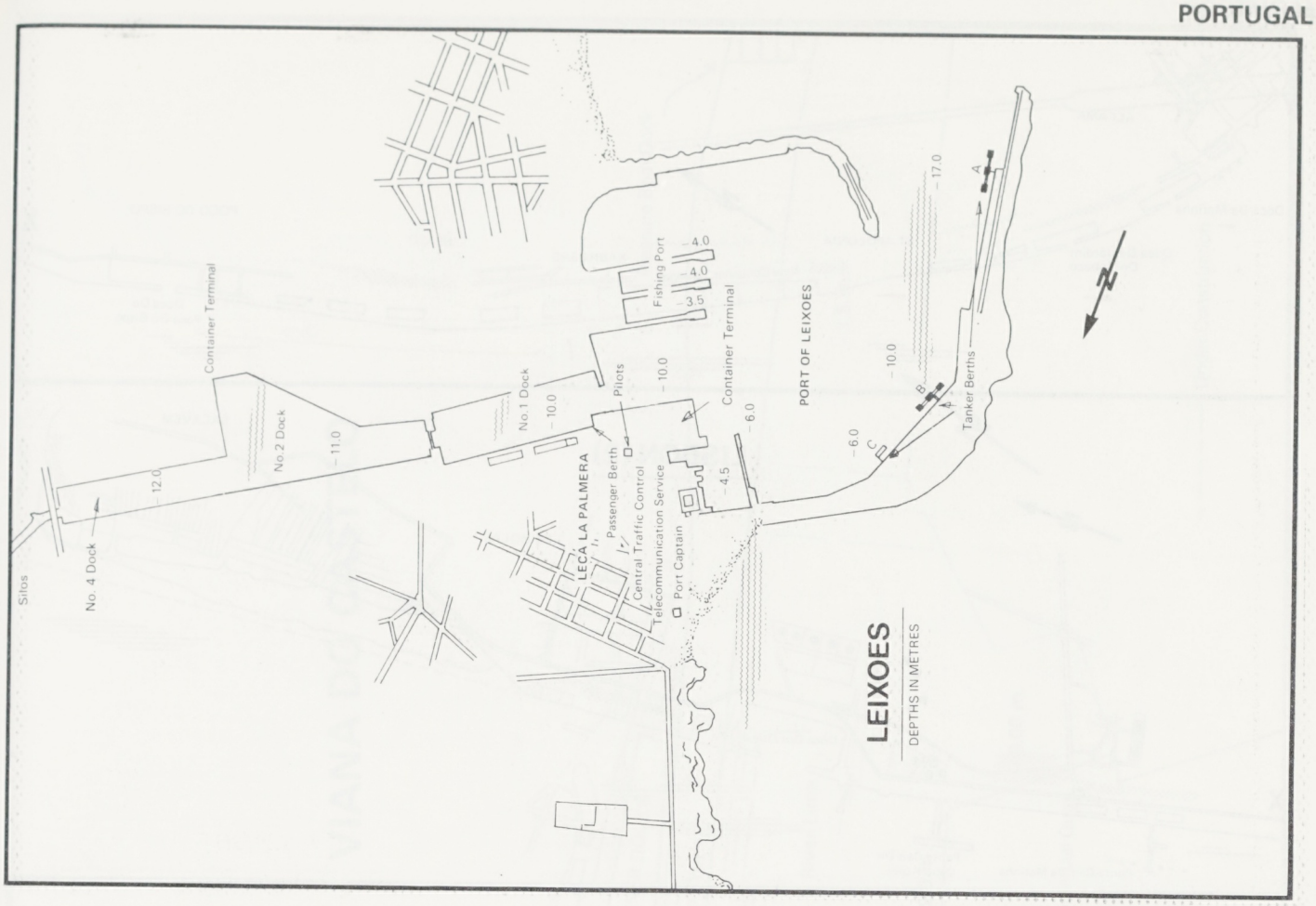

Container Terminal
Helski II Quay
Helski I Quay
Yugoslavia Quay
Norwegian Quay
BASIN VI
Wegierskie Quay
SHIPYARD AREA
Romanian Quay
BASIN V
Peace Fighters Quay
Czechoslovakian Quay
Customs office
Indian Quay
BASIN IV
Polish Quay
Ro/Ro Berth
Rotterdam Quay
Customs Office
Finnish Quay
French Quay
Belgian Quay
Harbour master's office
Passenger Terminal
Customs office
Dutch Quay
Ro-Ro Berth
Dunskie Quay
BASIN III
Port health office
Swedish Quay
Wenda Quay
MAIN ENTRANCE
Ship Repair Yard
Slaskie Quay
BASIN II
Angielskie Quay
Islandzkie Quay
Kutrowe Quay
BASIN I
Pomeranian Quay
Excursion terminal
SOUTH ENTRANCE
YACHT BASIN
GDYNIA

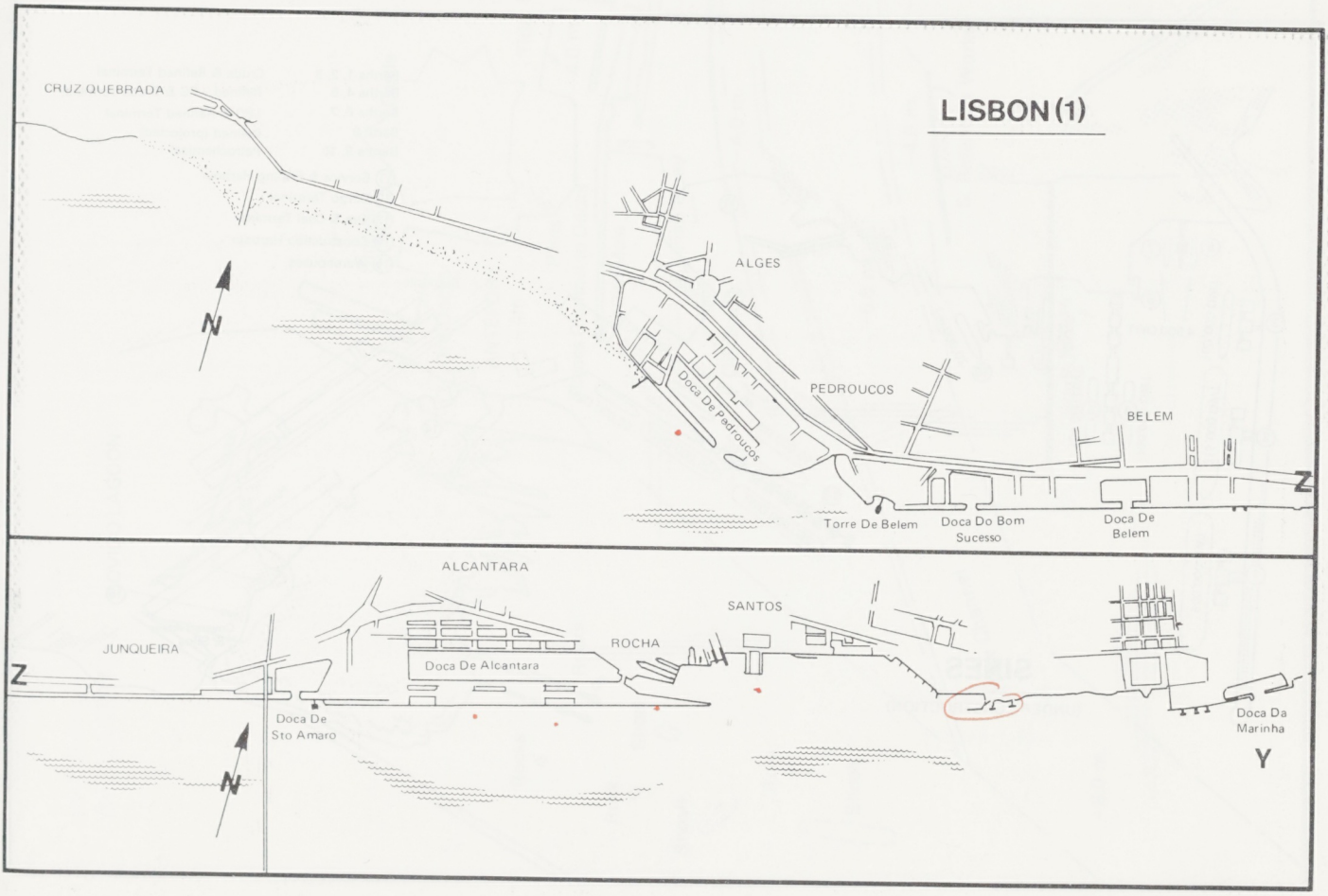

BALTIC SEA
RIVER SWINA
255m
– 14.0m
Chemikow Quay
329m
– 13.3m
Hutnikow Quay
280m
– 13.5m
Gornikow Quay
– 12.5m
Portowcow Quay
215m
Ferry Terminal
PPDUR Odra
Morska Stocznia Remontowa
Marine Ship Repair Yard
N
SWINOUJSCIE

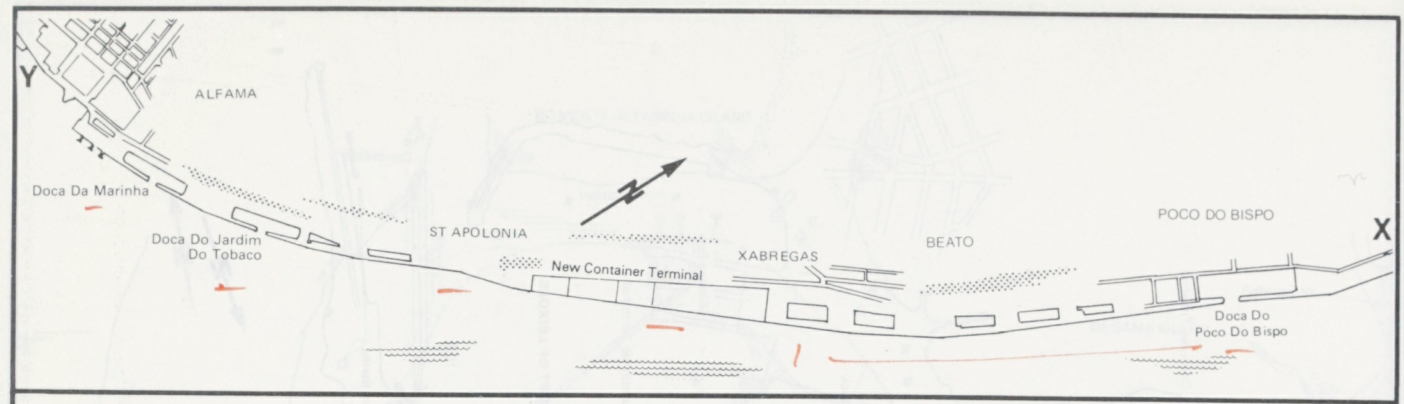

GORNICZY BASIN
Katowickie Quay
Chorzowskie Quay
Gliwickie Quay
Bytomskie Quay
Walbrzyskie Quay
Bydgoskie Quay
Orzewne Quay
Parnica Quay
Sosnowieckie Quay
GORNOSLASKI BASIN
OSTROW MIELENSKI
RIVER PARNICA
GRABOWSKI PENINSULA
Przemyslowy Channel
Grain Elevator 'Warta'
OKRETOWA ISLAND
GRYFIA
Ship Repair Yard
Debica
Dam
Czechostowackie Quay
Grain Elevator 'Ewa'
LASZTOWNIA
RIVER ODRA
Zbozowe Quay
Polskie Quay
Rumunskie Quay
Odra Quay
GRODZKI CHANNEL
Bielawa
East Basin
Greckie Quay
Radziechie Quay
West Basin
Harbour Master's Office
Tuncrycza
Starowka Quay
Bulgarskie Quay
Custom's Head Office
SZCZECIN
RIVER PARNICA
RIVER ODRA

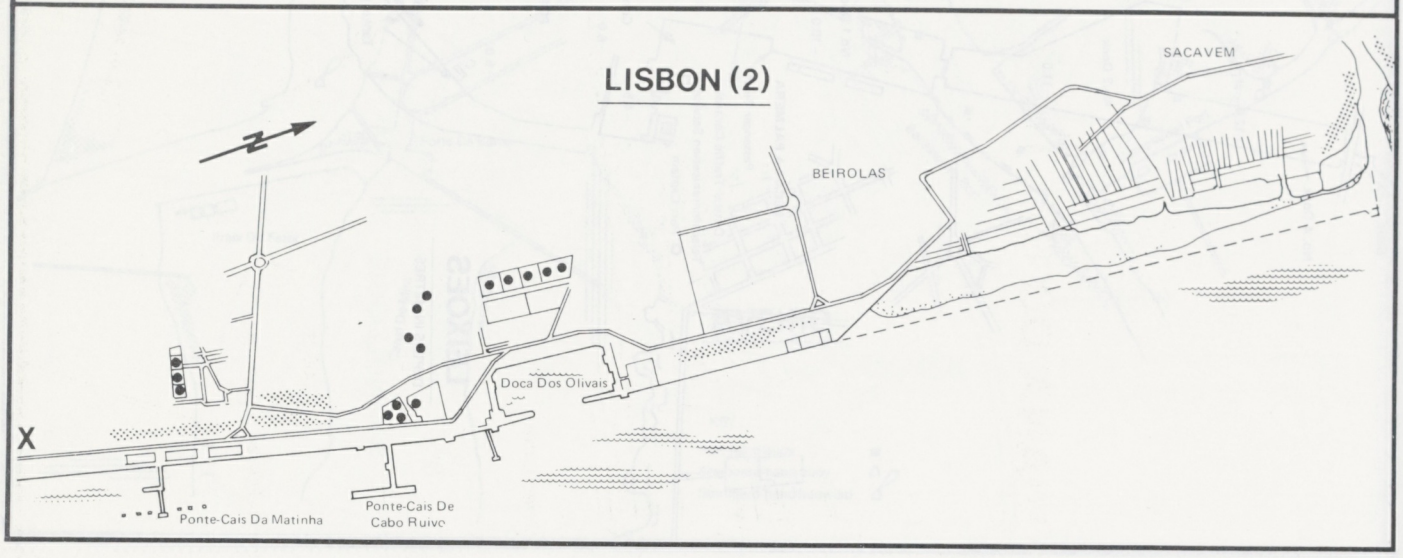

DO MONTE DE FARINHA ISLAND
S. Jacinto
Industrial Port
Fishing Port
DE SAMA ISLAND
Forte Da Barra
Commercial Port
Bacalhoeiro Port
Praia Do Farol
Canal De Mira
AVEIRO
KEY
Port-hand buoy
Starboard-hand buoy
Starboard-hand buoy (lit)

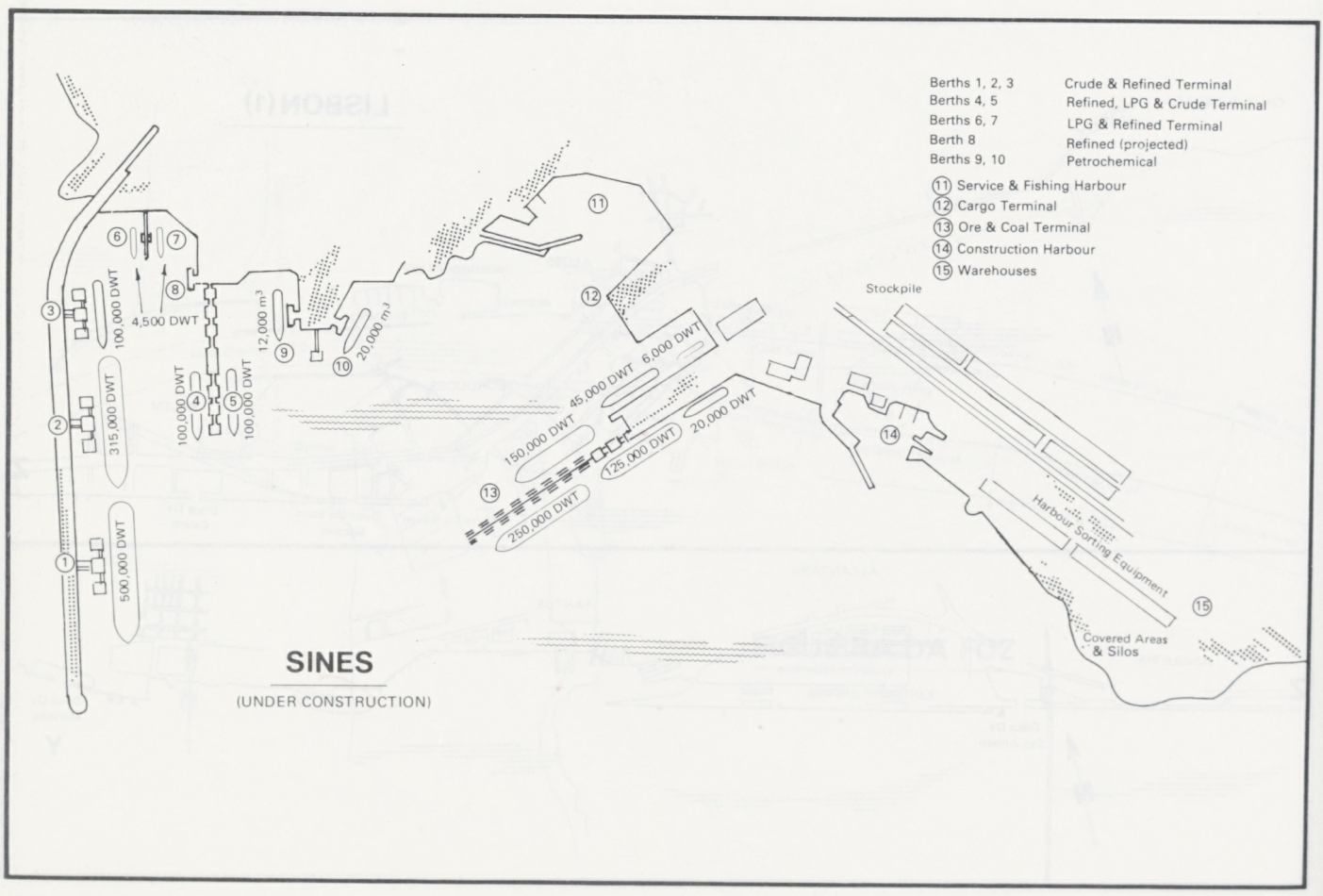

Area being planned
Current Bridge to be Demolished
Pleasure Port
Services
General Cargo
General Cargo
Main Channel −7.0
River Mondego
Cold Store
General Cargo
General Cargo
Reserve Area
Manoeuvring Basin −7.0
Shipyards
Shipyards
Grain Terminal
Slipway
Fishing Port
Future Bridge
Container Terminal
General Cargo
Reserve Area
FIGUEIRA DA FOZ
DEPTHS IN METRES

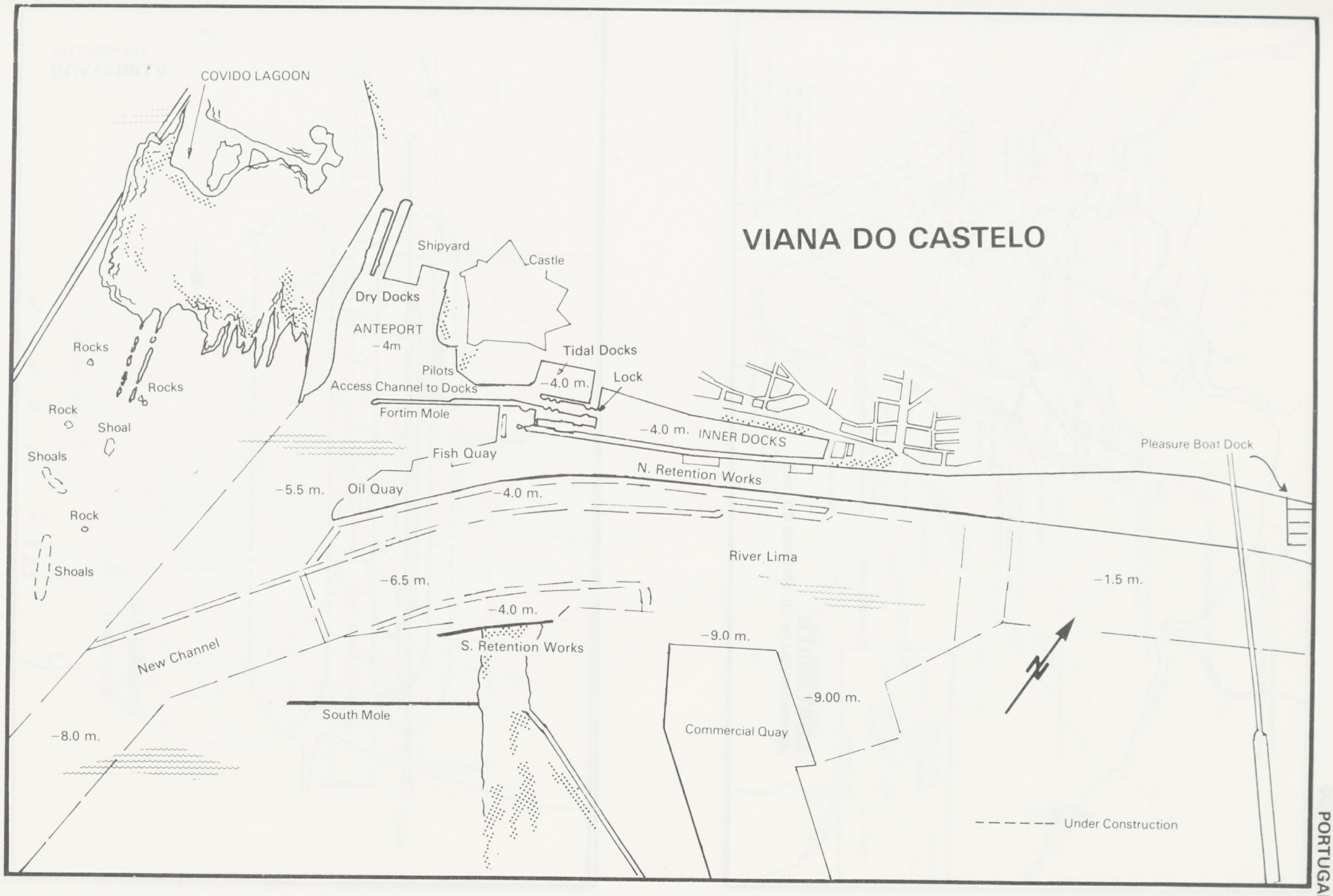

LEIXOES
DEPTHS IN METRES
PORT OF LEIXOES
LECA LA PALMERA
Container Terminal
No. 4 Dock
No. 2 Dock
No. 1 Dock
Fishing Port
Pilots
Passenger Berth
Central Traffic Control
Telecommunication Service
Port Captain
Tanker Berths
Silos
12.0
11.0
10.0
4.0
3.5
6.0
4.5
17.0
N

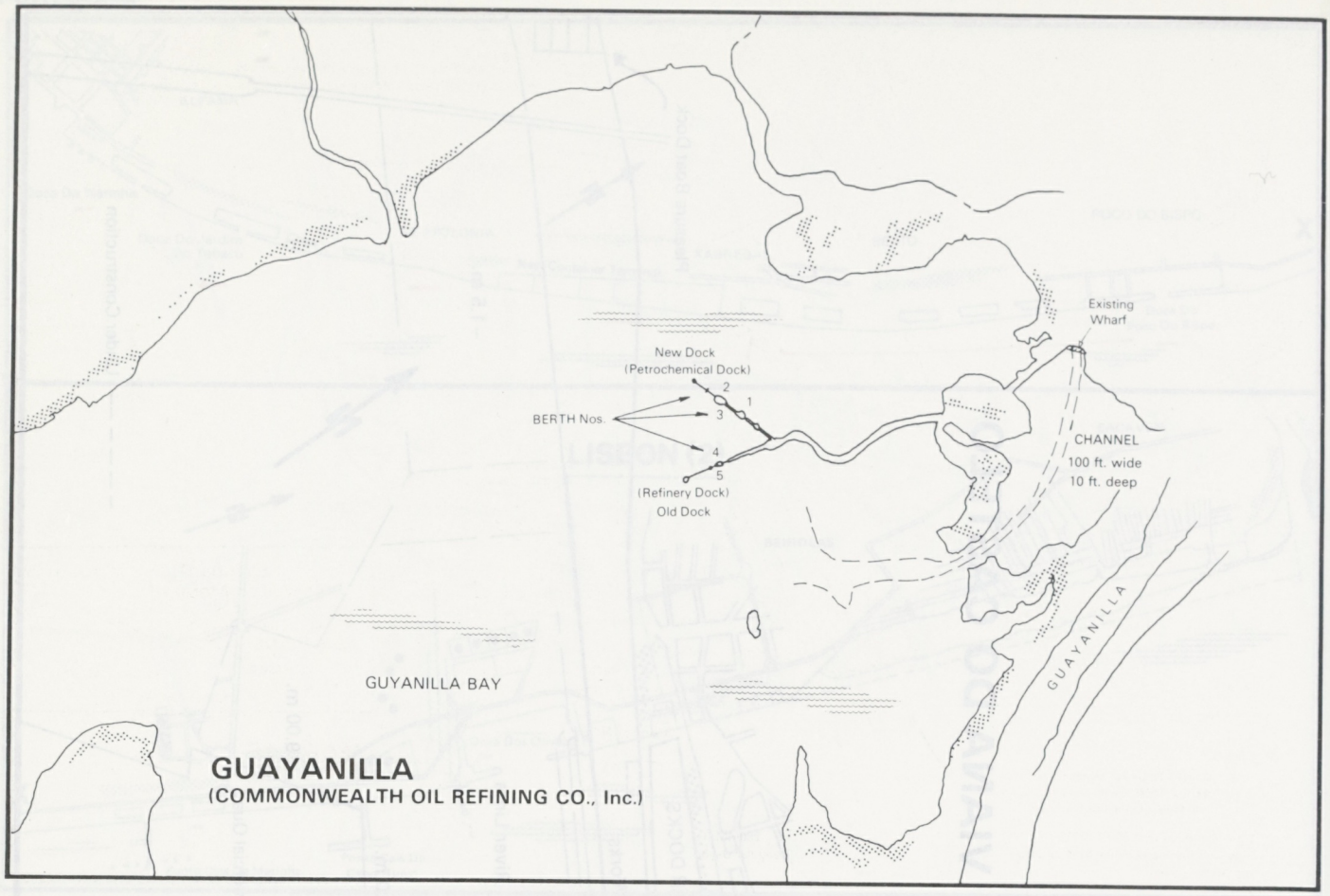

LISBON (1)
CRUZ QUEBRADA
ALGES
PEDROUCOS
Doca De Pedrouços
BELEM
Torre De Belem
Doca Do Bom Sucesso
Doca De Belem
ALCANTARA
JUNQUEIRA
Doca De Alcantara
ROCHA
SANTOS
Doca De Sto Amaro
Doca Da Marinha
Z
Y
N


Y
ALFAMA
Doca Da Marinha
Doca Do Jardim
Do Tobaco
ST APOLONIA
New Container Terminal
XABREGAS
BEATO
POCO DO BISPO
X
Doca Do
Poco Do Bispo

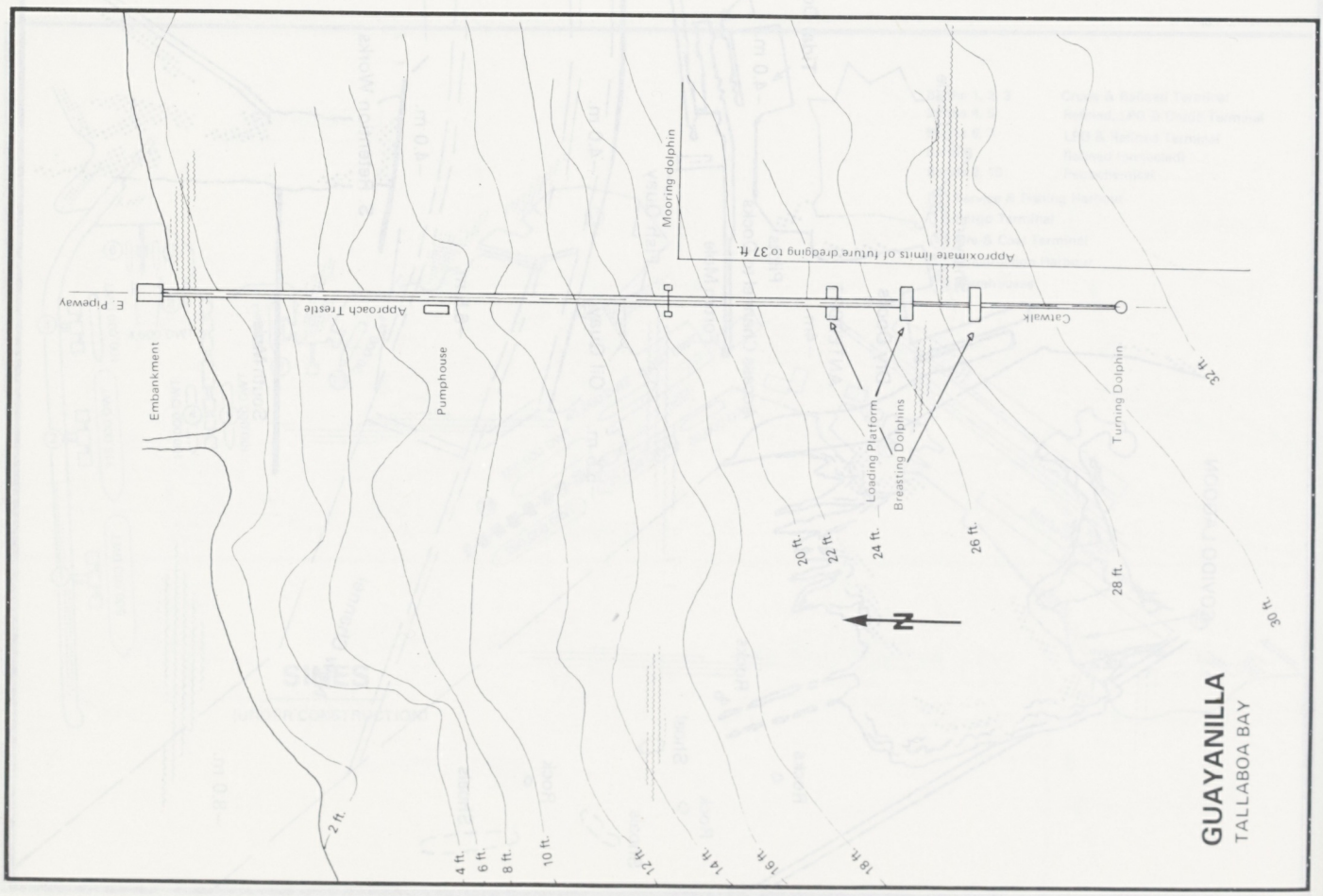

LISBON (2)
SACAVEM
BEIROLAS
Doca Dos Olivais
X
Ponte-Cais Da Matinha
Ponte-Cais De
Cabo Ruivo


Berths 1, 2, 3 Crude & Refined Terminal
Berths 4, 5 Refined, LPG & Crude Terminal
Berths 6, 7 LPG & Refined Terminal
Berth 8 Refined (projected)
Berths 9, 10 Petrochemical
11 Service & Fishing Harbour
12 Cargo Terminal
13 Ore & Coal Terminal
14 Construction Harbour
15 Warehouses
Stockpile
4,500 DWT
100,000 DWT
315,000 DWT
500,000 DWT
100,000 DWT
100,000 DWT
12,000 m³
20,000 m³
45,000 DWT
6,000 DWT
150,000 DWT
125,000 DWT
20,000 DWT
250,000 DWT
Harbour Sorting Equipment
Covered Areas
& Silos
SINES
(UNDER CONSTRUCTION)

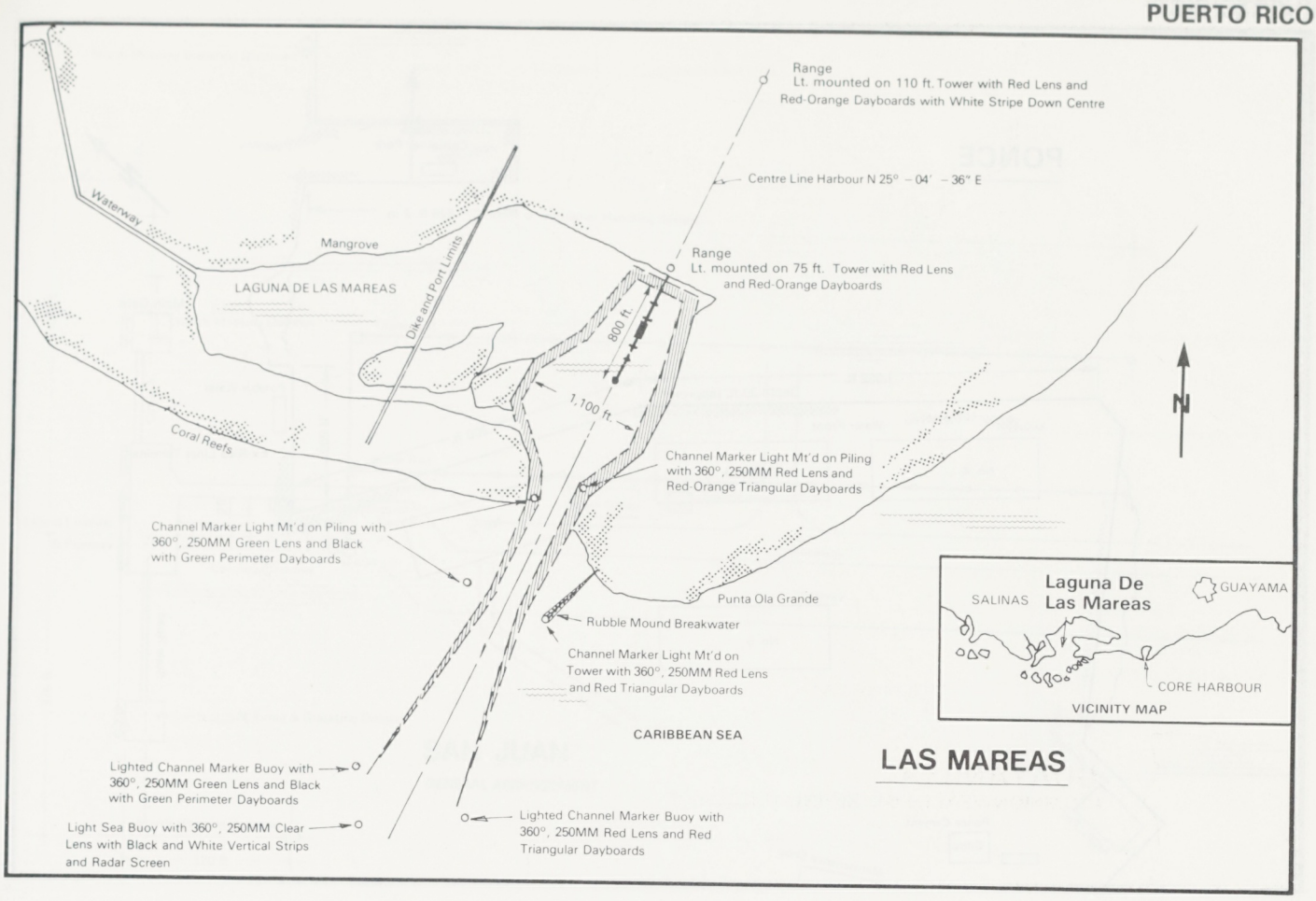

VIANA DO CASTELO
COVIDO LAGOON
Shipyard
Castle
Dry Docks
ANTEPORT
−4m
Tidal Docks
Pilots
Access Channel to Docks
−4.0 m.
Lock
Fortim Mole
−4.0 m. INNER DOCKS
Pleasure Boat Dock
Fish Quay
N. Retention Works
−5.5 m.
Oil Quay
−4.0 m.
Rocks
Rocks
Rock
Shoal
Shoals
Rock
Shoals
River Lima
−6.5 m.
−1.5 m.
−4.0 m.
S. Retention Works
−9.0 m.
New Channel
South Mole
−9.00 m.
Commercial Quay
−8.0 m.
Under Construction

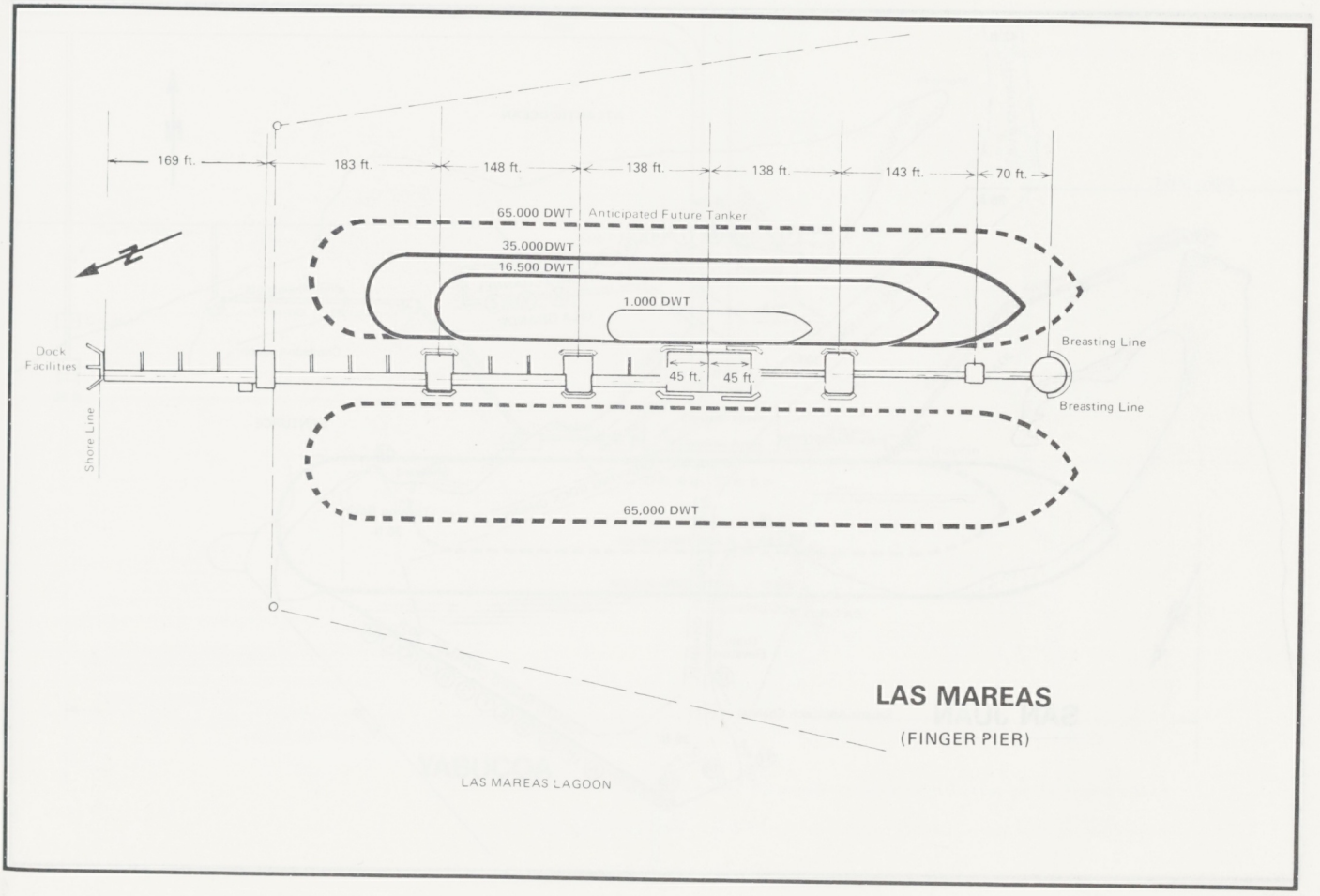


GUAYANILLA
(COMMONWEALTH OIL REFINING CO., Inc.)



GUAYANILLA
TALLABOA BAY

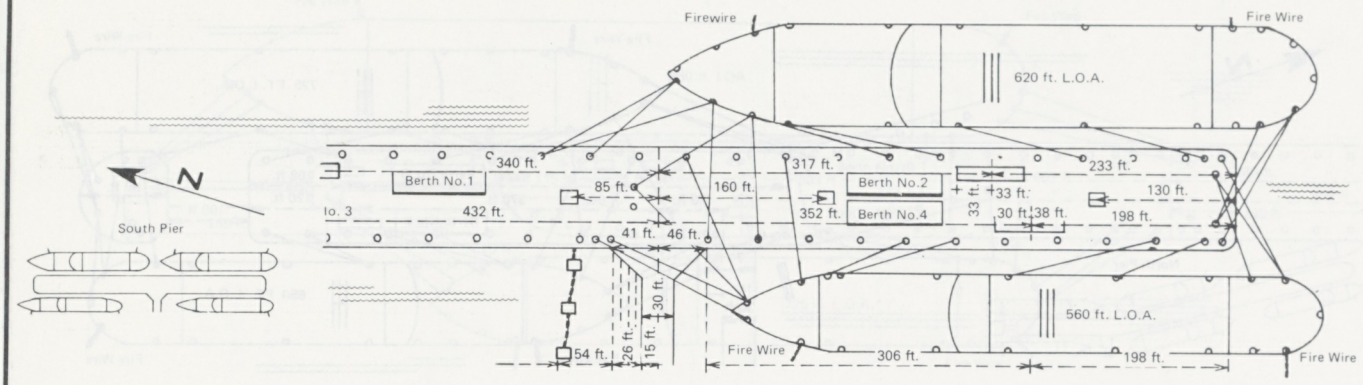

Range
Lt. mounted on 110 ft. Tower with Red Lens and
Red-Orange Dayboards with White Stripe Down Centre
Centre Line Harbour N 25° – 04′ – 36″ E
Range
Lt. mounted on 75 ft. Tower with Red Lens
and Red-Orange Dayboards
Waterway
Mangrove
LAGUNA DE LAS MAREAS
Dike and Port Limits
800 ft.
1,100 ft.
Coral Reefs
N
Channel Marker Light Mt'd on Piling
with 360°, 250MM Red Lens and
Red-Orange Triangular Dayboards
Channel Marker Light Mt'd on Piling with
360°, 250MM Green Lens and Black
with Green Perimeter Dayboards
Punta Ola Grande
Rubble Mound Breakwater
Channel Marker Light Mt'd on
Tower with 360°, 250MM Red Lens
and Red Triangular Dayboards
CARIBBEAN SEA
Lighted Channel Marker Buoy with
360°, 250MM Green Lens and Black
with Green Perimeter Dayboards
Light Sea Buoy with 360°, 250MM Clear
Lens with Black and White Vertical Strips
and Radar Screen
Lighted Channel Marker Buoy with
360°, 250MM Red Lens and Red
Triangular Dayboards
Laguna De
Las Mareas
SALINAS
GUAYAMA
CORE HARBOUR
VICINITY MAP
LAS MAREAS


169 ft.
183 ft.
148 ft.
138 ft.
138 ft.
143 ft.
70 ft.
65.000 DWT
Anticipated Future Tanker
35.000DWT
16.500 DWT
1.000 DWT
N
Dock
Facilities
Shore Line
45 ft.
45 ft.
Breasting Line
Breasting Line
65,000 DWT
LAS MAREAS
(FINGER PIER)
LAS MAREAS LAGOON

Mooring-Diagram Tank-Vessels at South Pier Ras Tanura, Heading North.

Approx. Minimum Depths at Berths at I.S.L.W.	Approximate Direction of Pier	Maneuvering Drafts
Berth No. 2 .... 32 feet Berth No. 4 .... 30 feet	346 Degrees True	Pilots require sufficient clean ballast for safe maneuvering. The propellers should be covered. The trim of the vessel should not exceed ten feet by the stern.

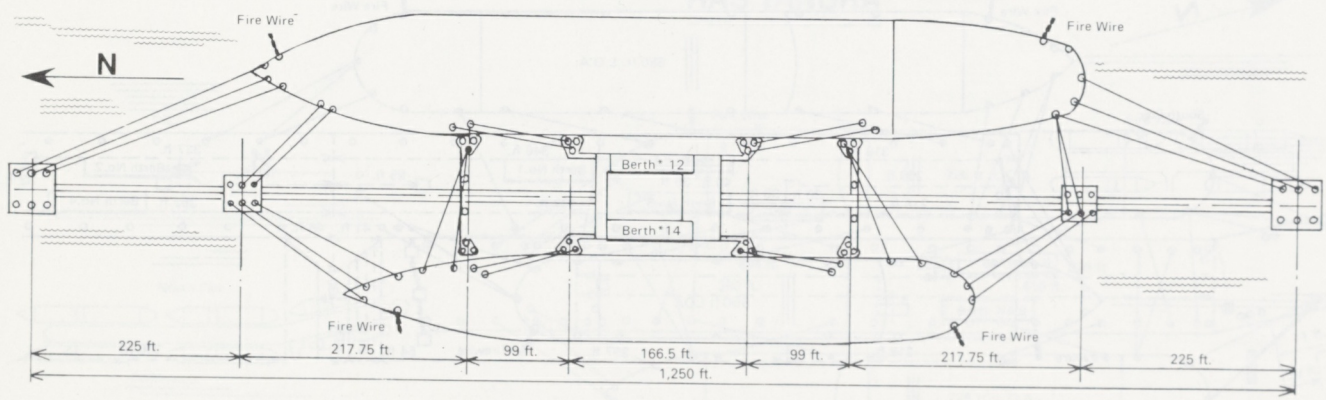
RAS TANURA



Mooring-Diagram Tank-Vessels at Sea Island No. 1 Ras Tanura, Heading North.

Approx. Minimum Depths at Berths at I.S.L.W.	Approx. Direction of Sea Island	Minimum Maneuvering Drafts
Berth No.12 ..... 85 feet Berth No.14 ..... 85 feet	356 Degrees True	*Pilots require sufficient clean ballast for safe maneuvering. The propellers should be covered. The trim of the vessel should not exceed fifteen feet by the stern.

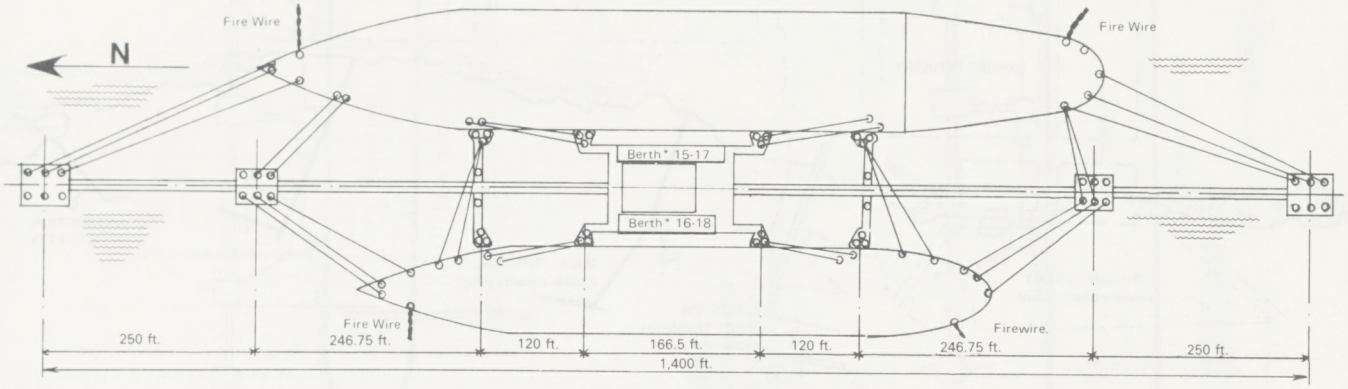
RAS TANURA



Mooring-Diagram Tank-Vessels at Sea Islands No. 2 and 3 Ras Tanura, Heading North

Approx. Min. Depths at Berths at I.S.L.W.	Approx. Direction of Sea Island	Minimum Maneuvering Drafts
Berth No.15 ..... 85 feet Berth No.17 ..... 85 feet Berth No.16 ..... 85 feet Berth No.18 ..... 85 feet	356 Degrees True	*Pilots require sufficient clean ballast for safe maneuvering. The propellers should be covered. The trim of the vessel should not exceed fifteen feet by the stern.

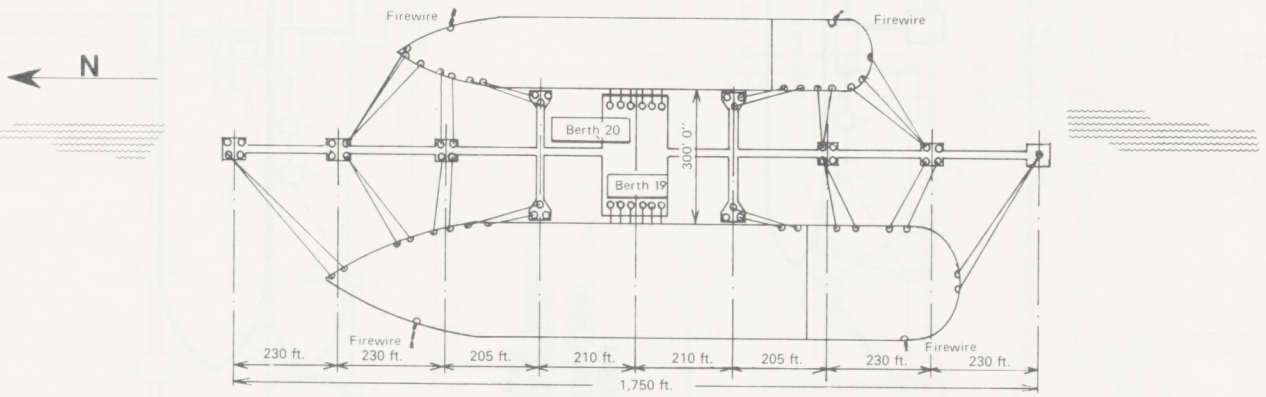
RAS TANURA

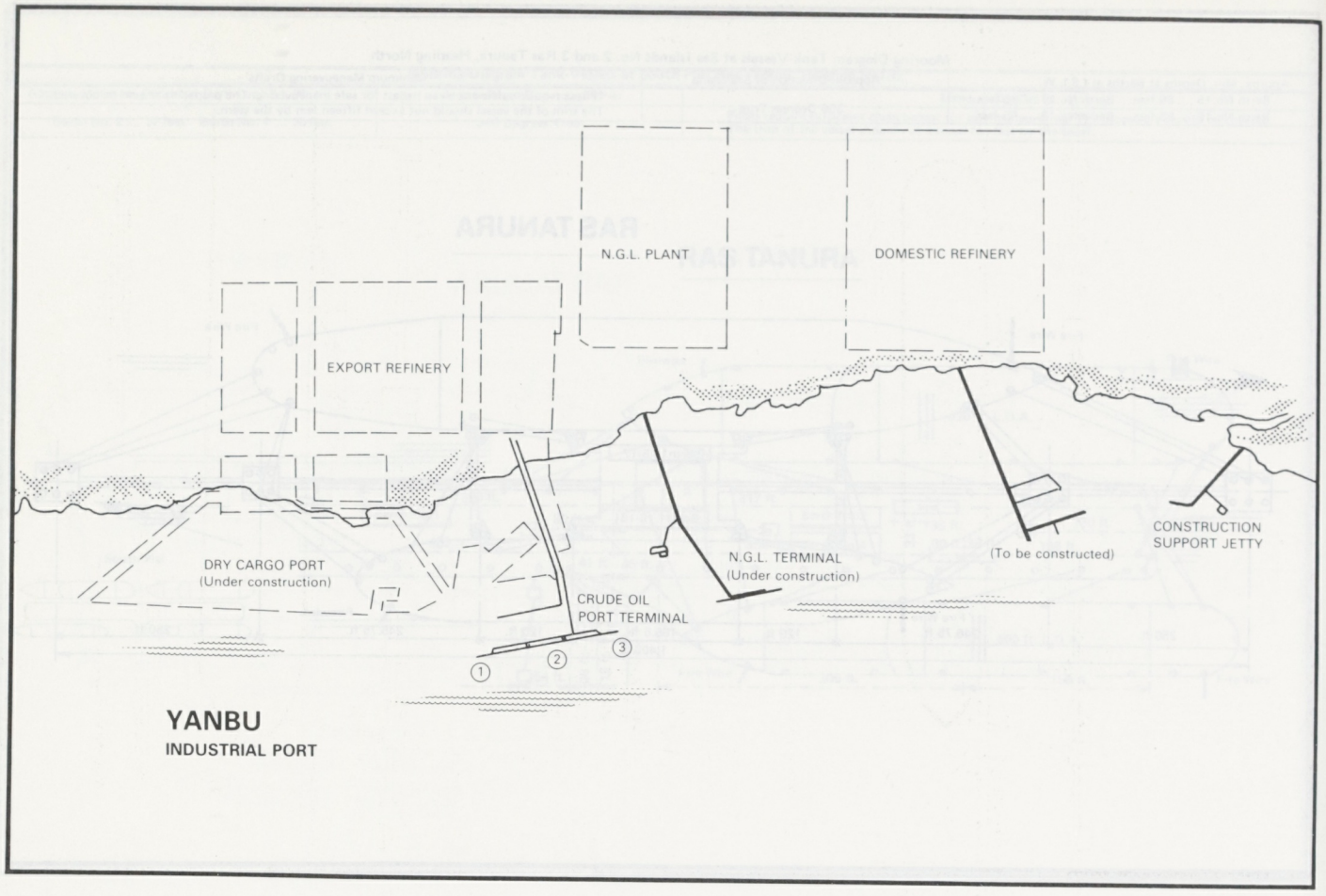


Mooring-Diagram Tank-Vessels at Sea Island No. 4 Ras Tanura Heading North

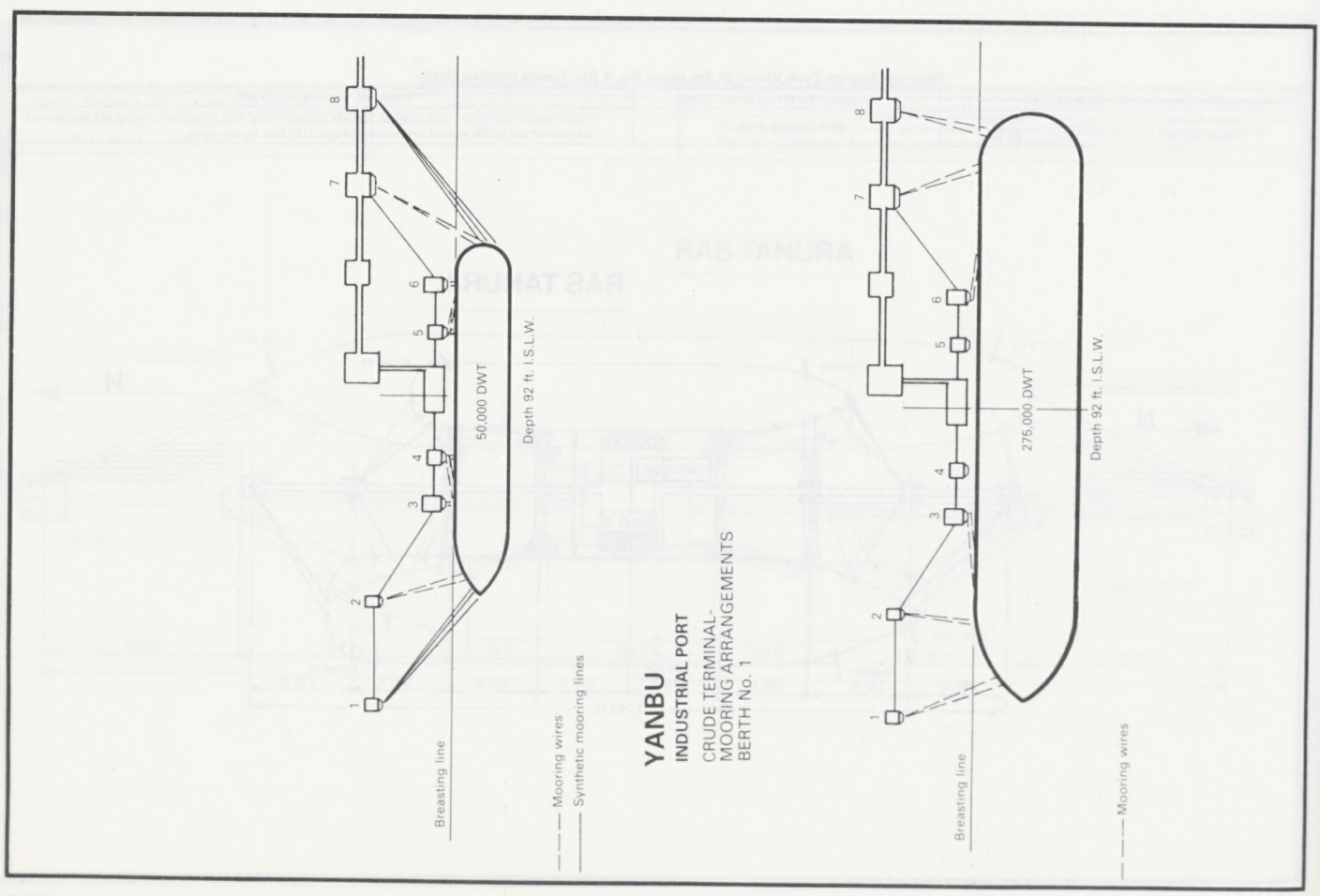
Approx. Min. Depths at Berths at I.S.L.W.	Approx. Direction of Sea Island	Minimum Maneuvering Drafts
Berth No.19 ..... 85 feet Berth No.20 ..... 85 feet	356 Degrees True	*Pilots require sufficient clean ballast for safe maneuvering. The propellers should not be covered. The trim of the vessel should not exceed fifteen (15) feet by the stern.

RAS TANURA

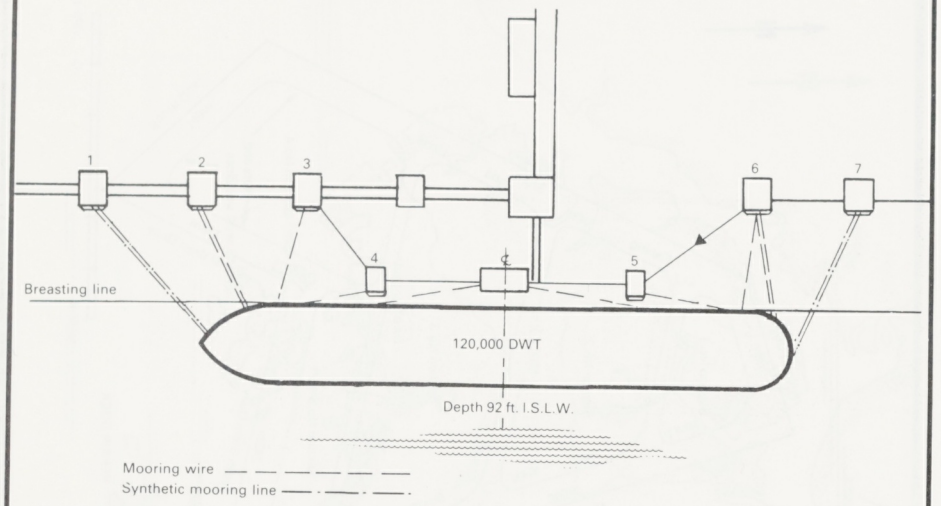




YANBU
INDUSTRIAL PORT

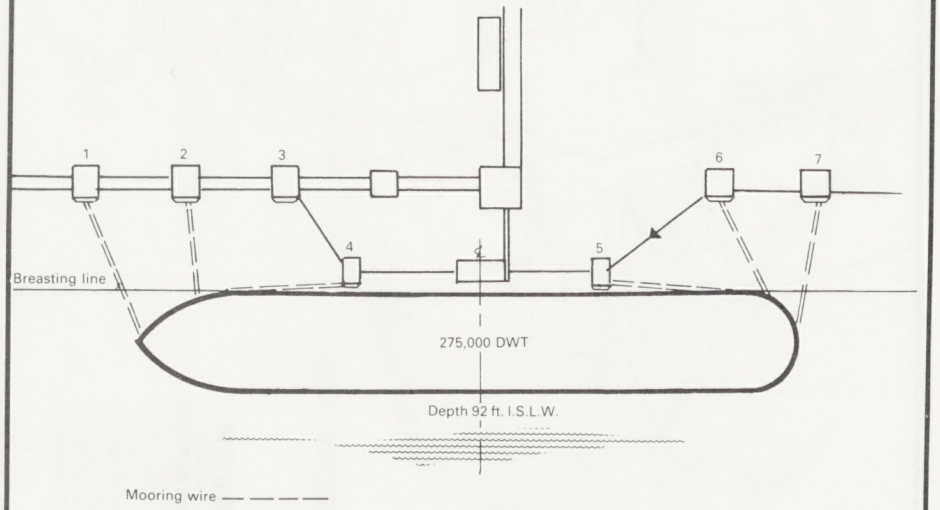


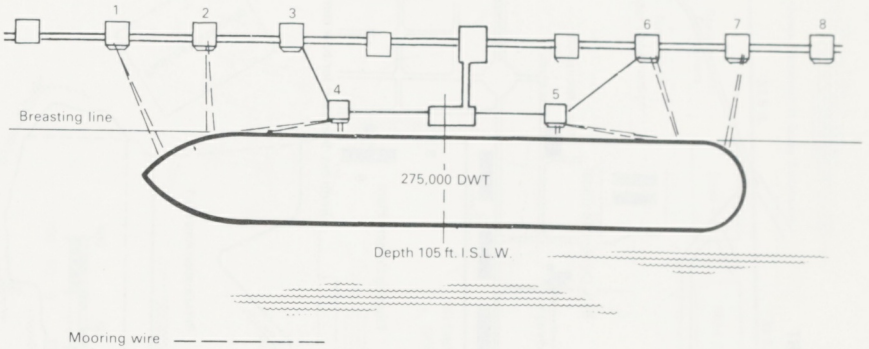
YANBU
INDUSTRIAL PORT
CRUDE TERMINAL-
MOORING ARRANGEMENTS
BERTH No. 1



YANBU
INDUSTRIAL PORT

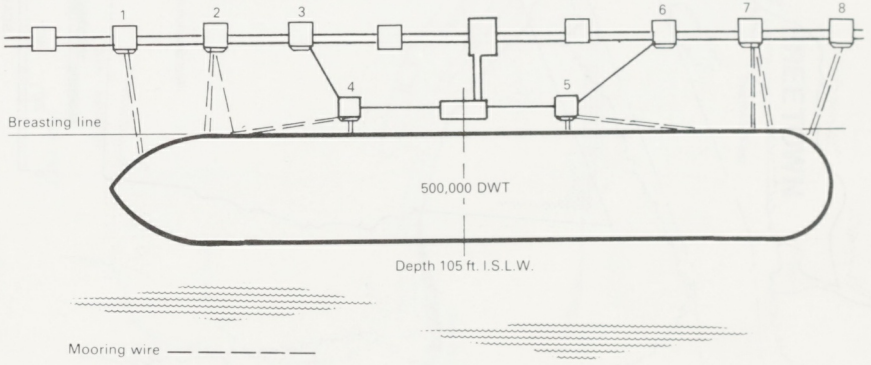
CRUDE TERMINAL-
MOORING ARRANGEMENTS
No. 3 BERTH

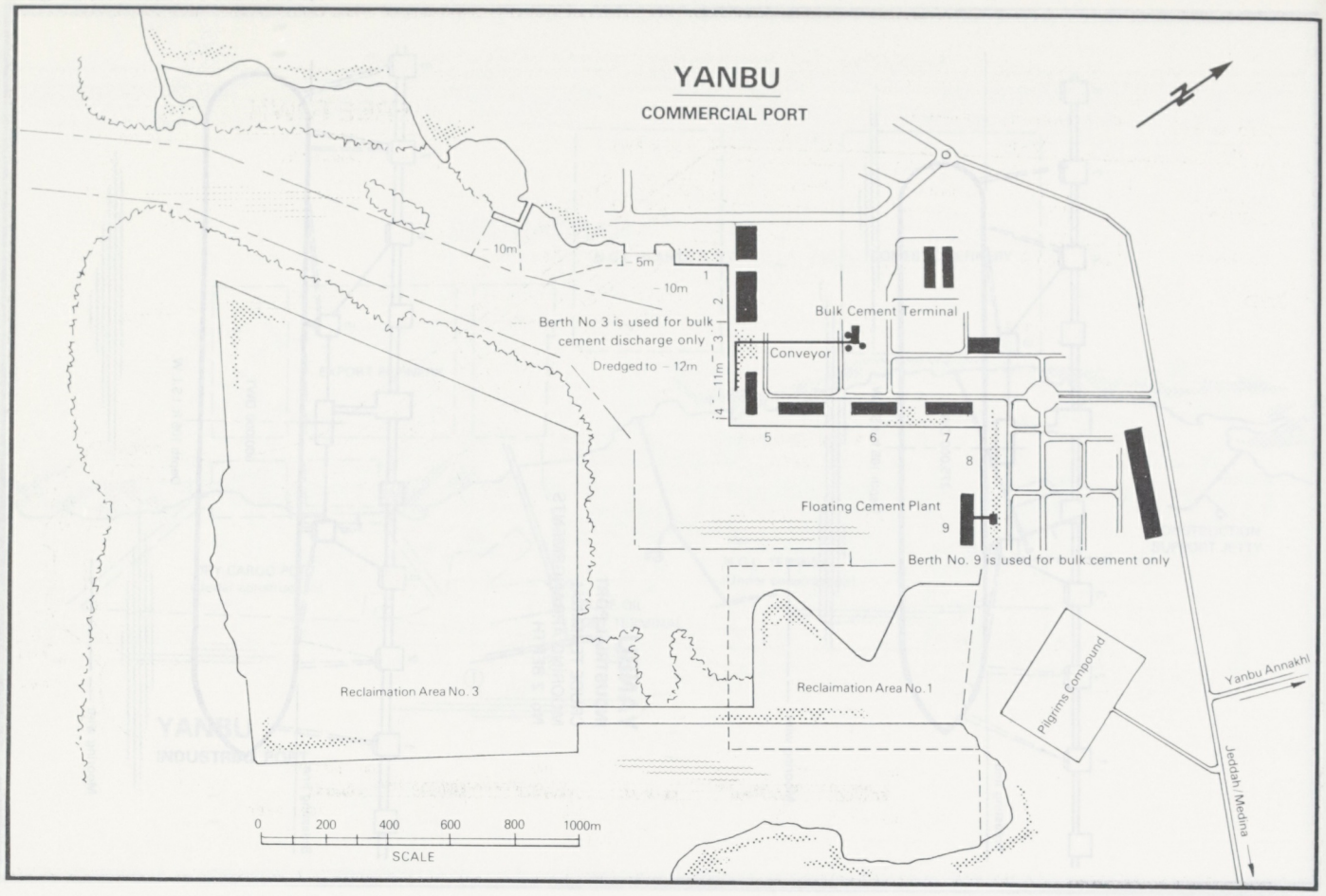


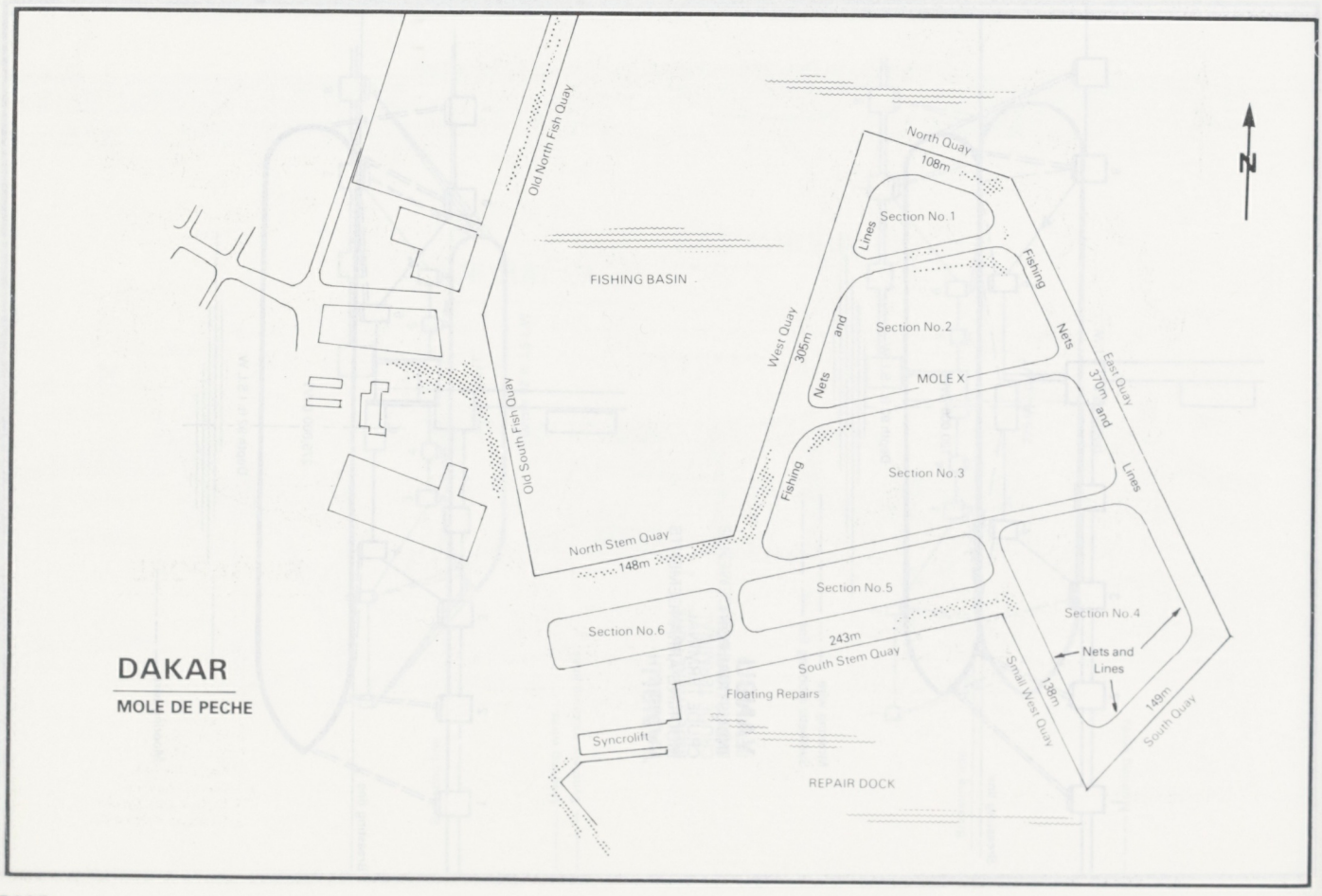


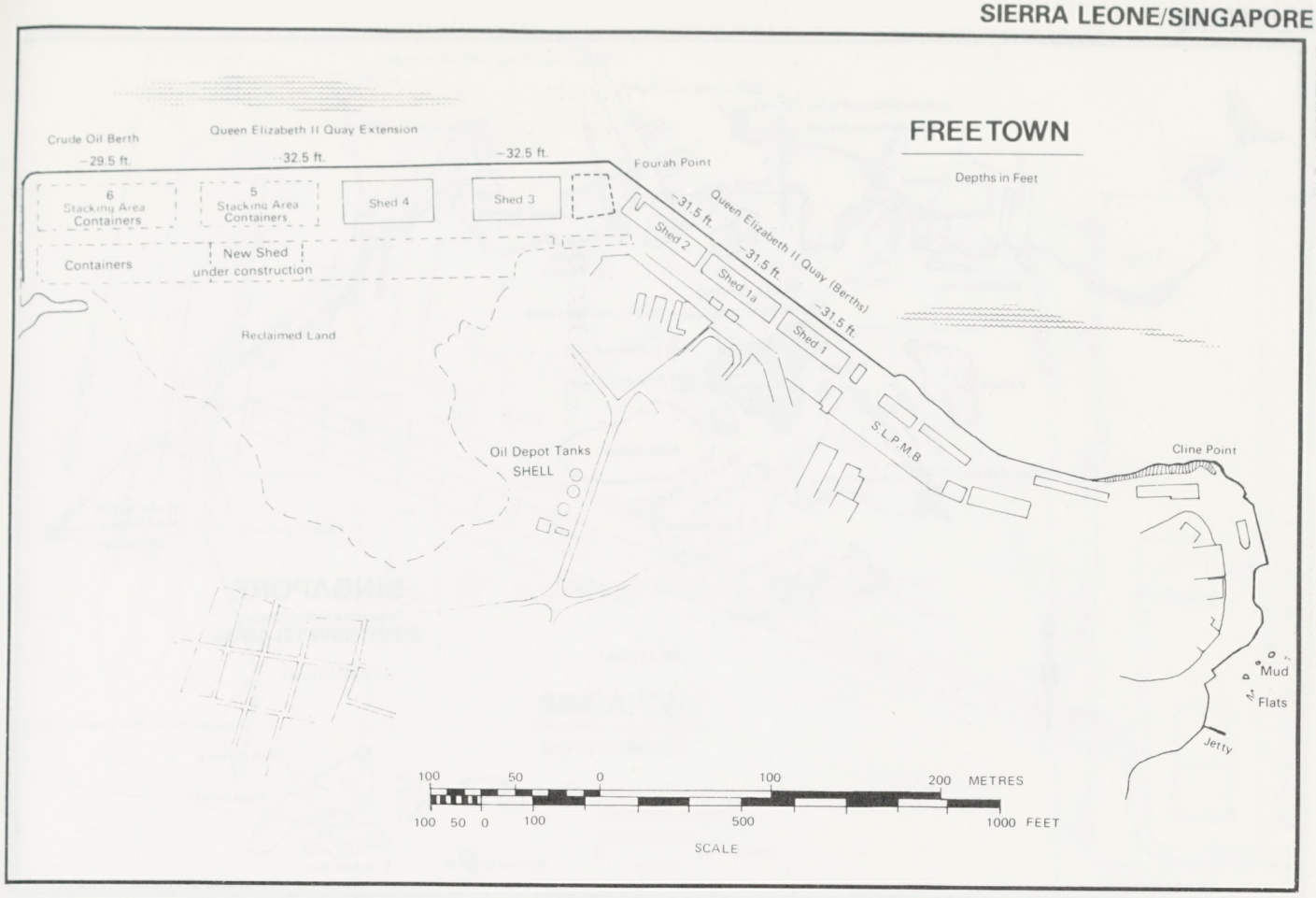
YANBU
INDUSTRIAL PORT

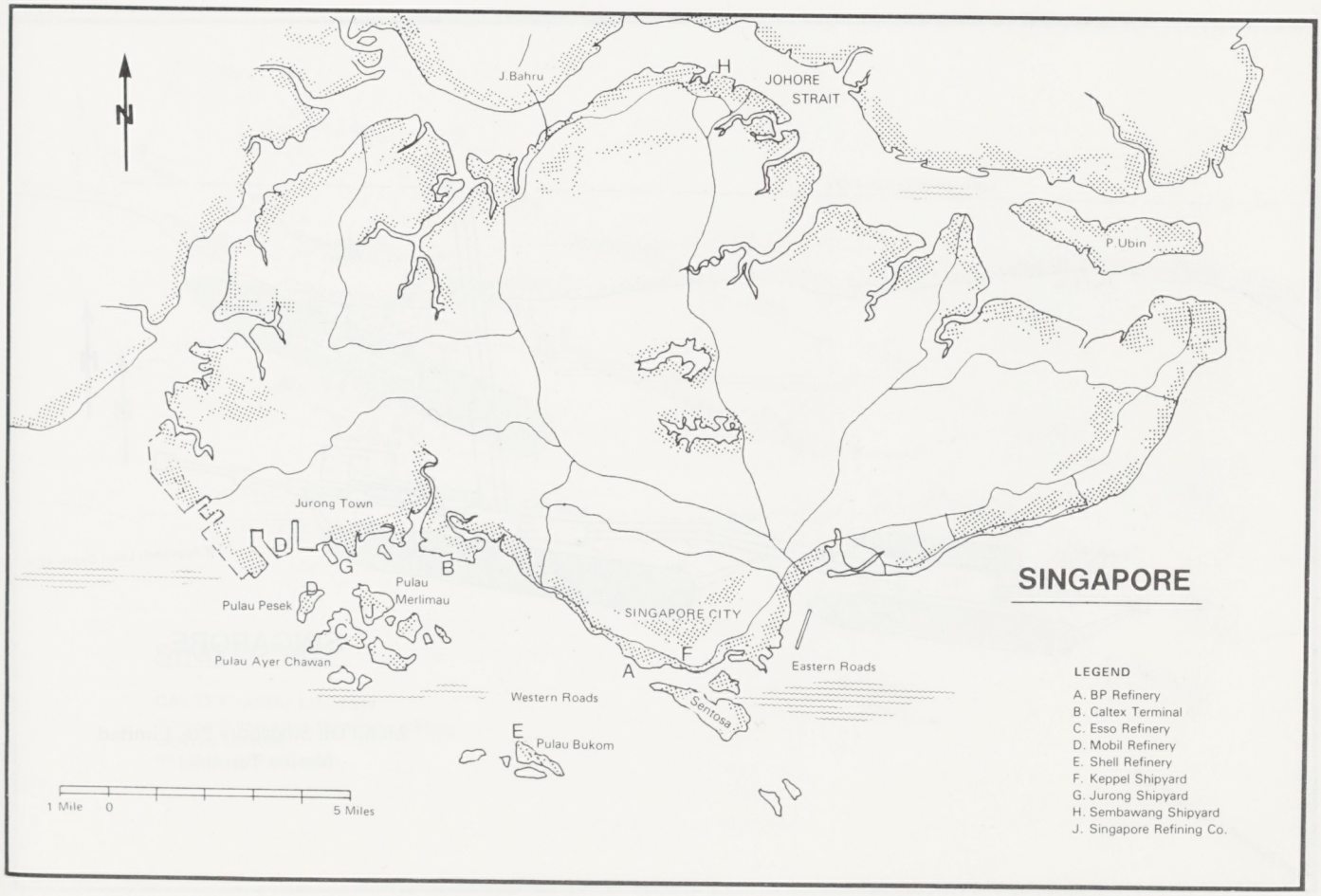
CRUDE TERMINAL-
MOORING ARRANGEMENTS
No. 2 BERTH

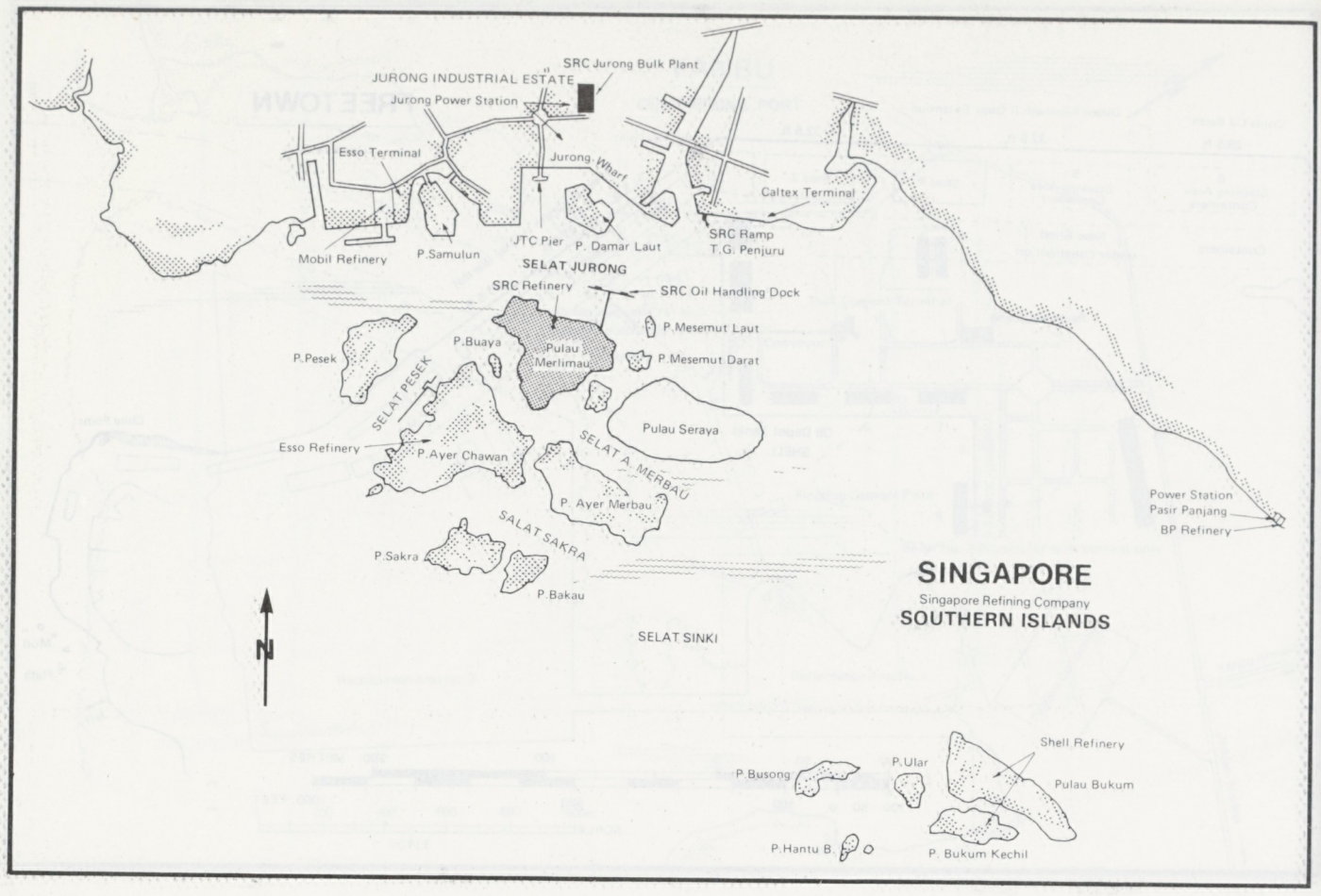


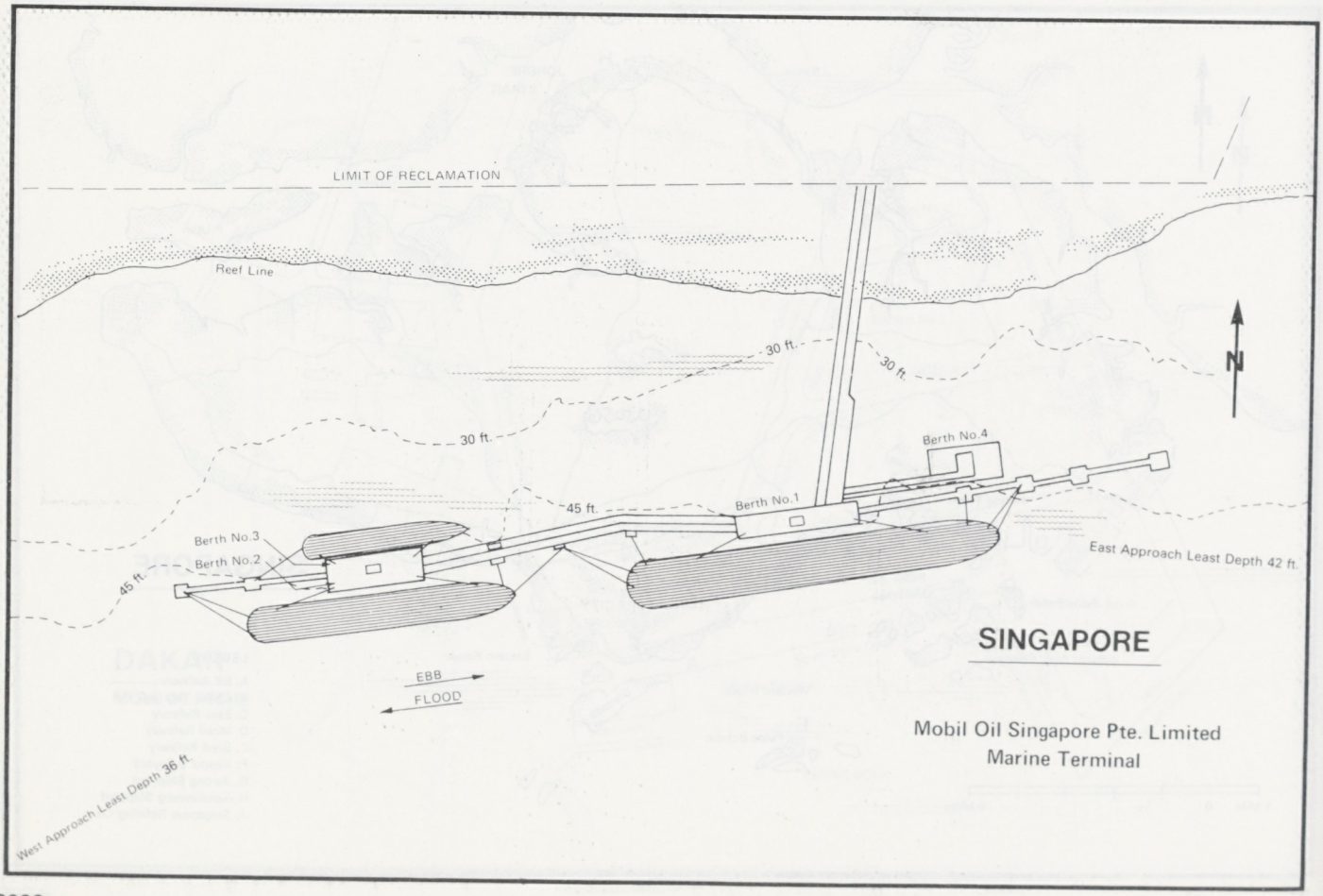

YANBU
COMMERCIAL PORT
N
10m
5m
10m
Berth No 3 is used for bulk cement discharge only
Dredged to – 12m
Bulk Cement Terminal
Conveyor
11m
1
2
3
4
5
6
7
8
9
Floating Cement Plant
Berth No. 9 is used for bulk cement only
Reclaimation Area No. 3
Reclaimation Area No. 1
Pilgrims Compound
Yanbu Annakhl
Jeddah/Medina
0 200 400 600 800 1000m
SCALE

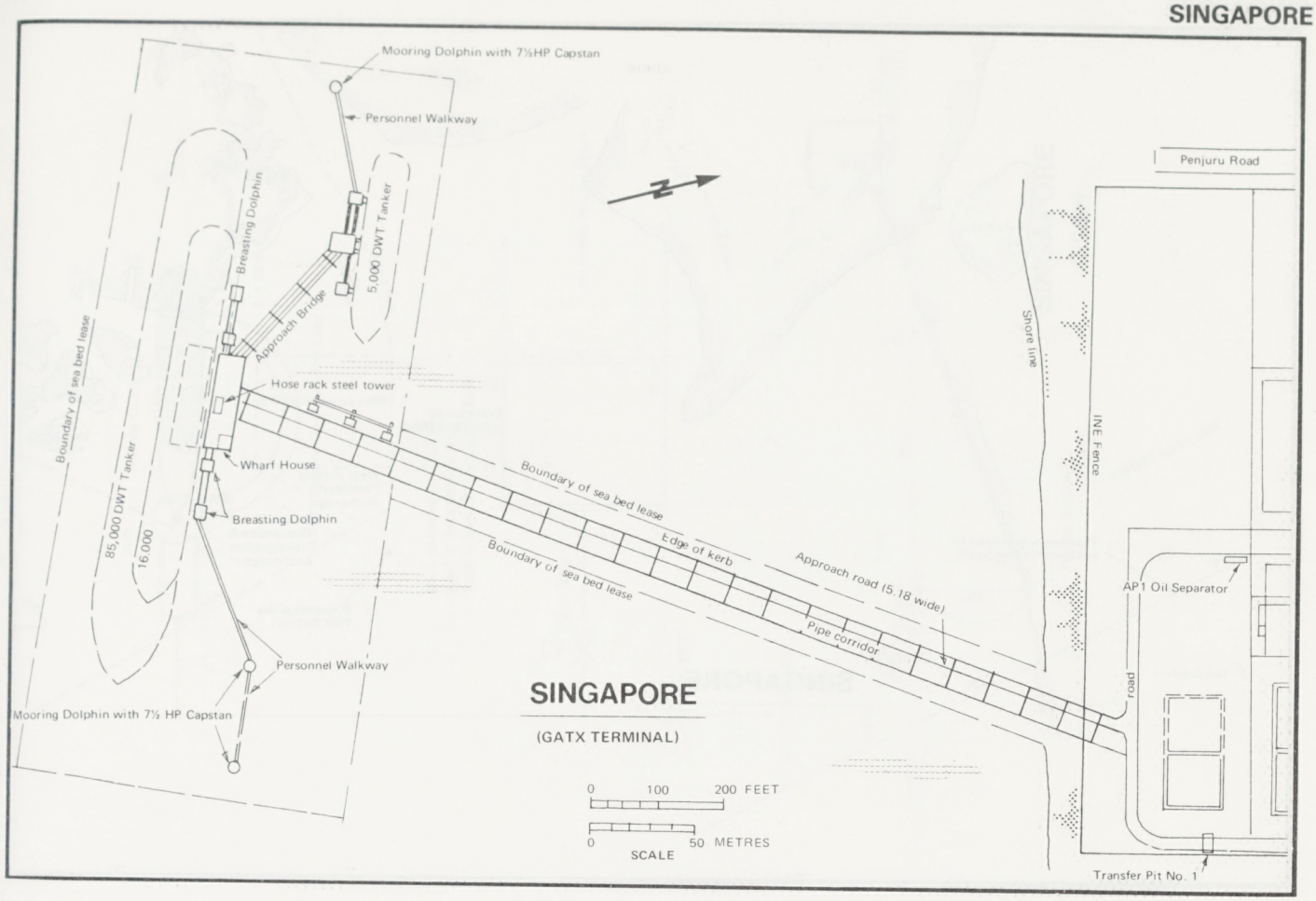

DAKAR
MOLE DE PECHE
N
Old North Fish Quay
Old South Fish Quay
FISHING BASIN
North Quay
108m
Section No.1
Lines
Fishing
Nets
and
Section No.2
West Quay
305m
MOLE X
East Quay
370m
and
Lines
Section No.3
North Stem Quay
148m
Section No.5
Section No.6
Section No.4
Nets and Lines
243m
South Stem Quay
Small West Quay
138m
149m
South Quay
Floating Repairs
Syncrolift
REPAIR DOCK

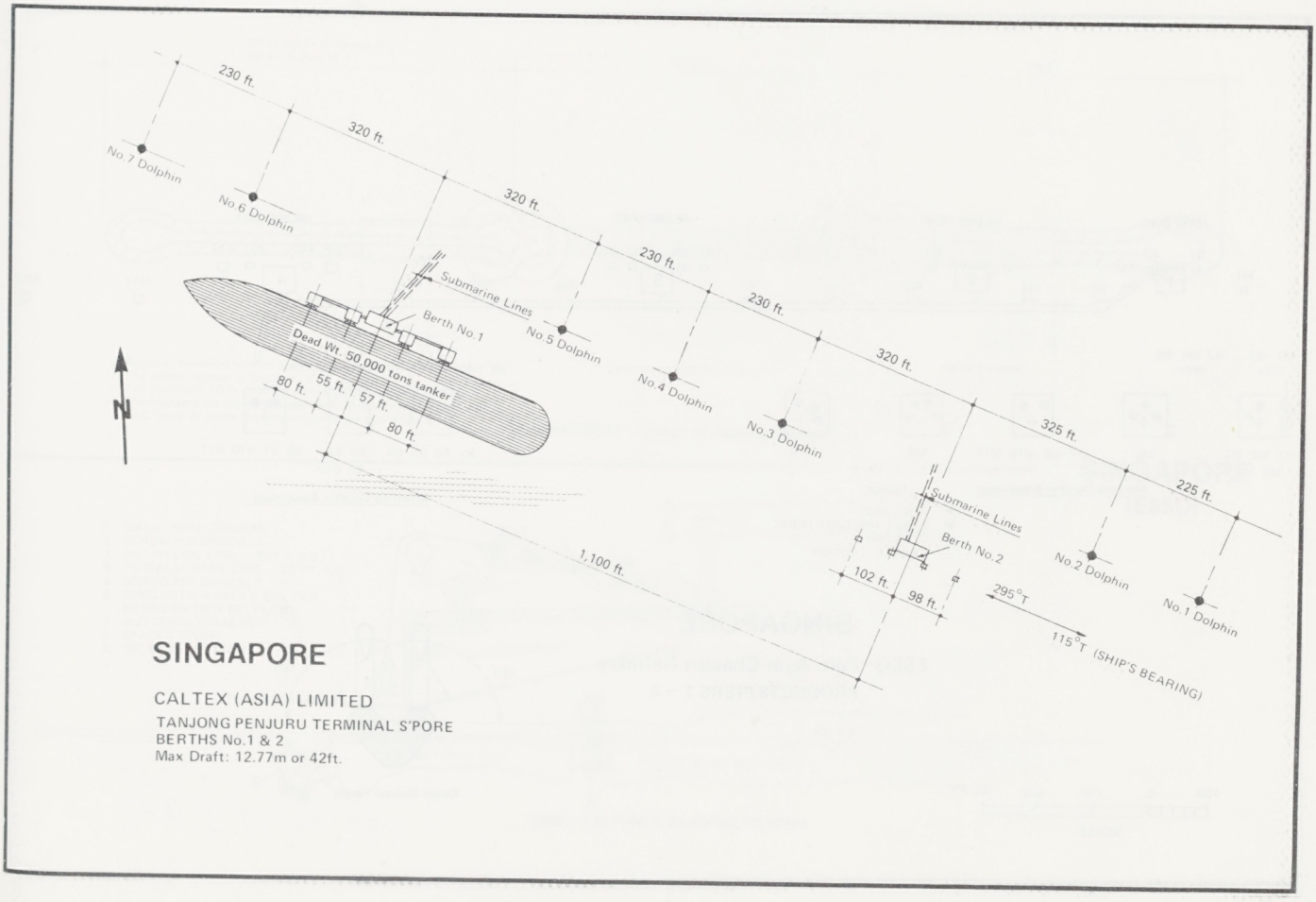

FREETOWN
Depths in Feet
Crude Oil Berth
−29.5 ft.
Queen Elizabeth II Quay Extension
−32.5 ft.
−32.5 ft.
Fourah Point
6 Stacking Area Containers
5 Stacking Area Containers
Shed 4
Shed 3
Containers
New Shed under construction
Reclaimed Land
Queen Elizabeth II Quay (Berths)
−31.5 ft.
−31.5 ft.
−31.5 ft.
Shed 2
Shed 1a
Shed 1
S.L.P.M.B
Oil Depot Tanks SHELL
Cline Point
Mud Flats
Jetty
100 50 0 100 200 METRES
100 50 0 100 500 1000 FEET
SCALE

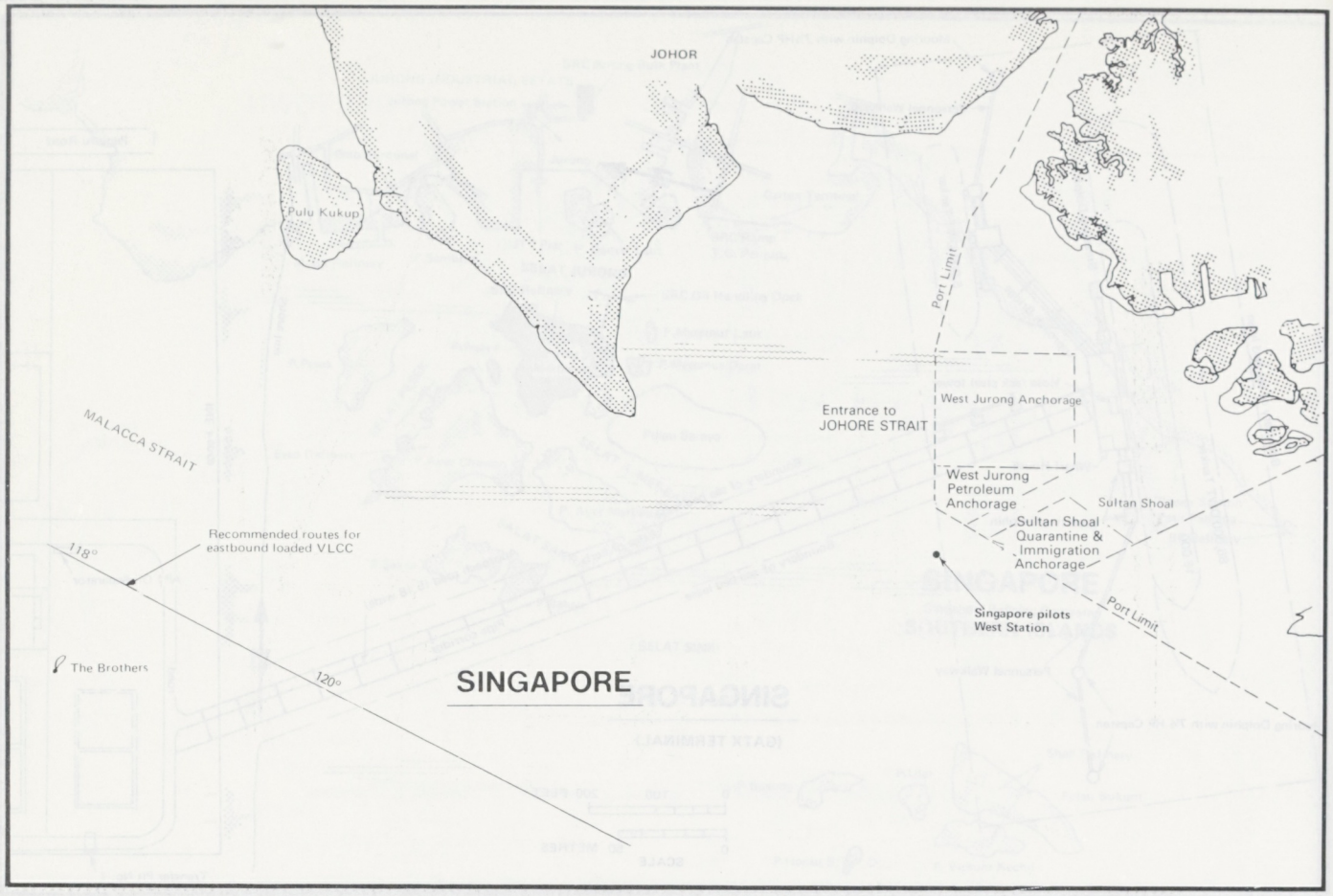

N
J.Bahru
H
JOHORE STRAIT
P.Ubin
Jurong Town
D
G
B
Pulau Merlimau
Pulau Pesek
C
Pulau Ayer Chawan
SINGAPORE CITY
A
F
Eastern Roads
Western Roads
Sentosa
E
Pulau Bukom
1 Mile 0 5 Miles
SINGAPORE
LEGEND
A. BP Refinery
B. Caltex Terminal
C. Esso Refinery
D. Mobil Refinery
E. Shell Refinery
F. Keppel Shipyard
G. Jurong Shipyard
H. Sembawang Shipyard
J. Singapore Refining Co.

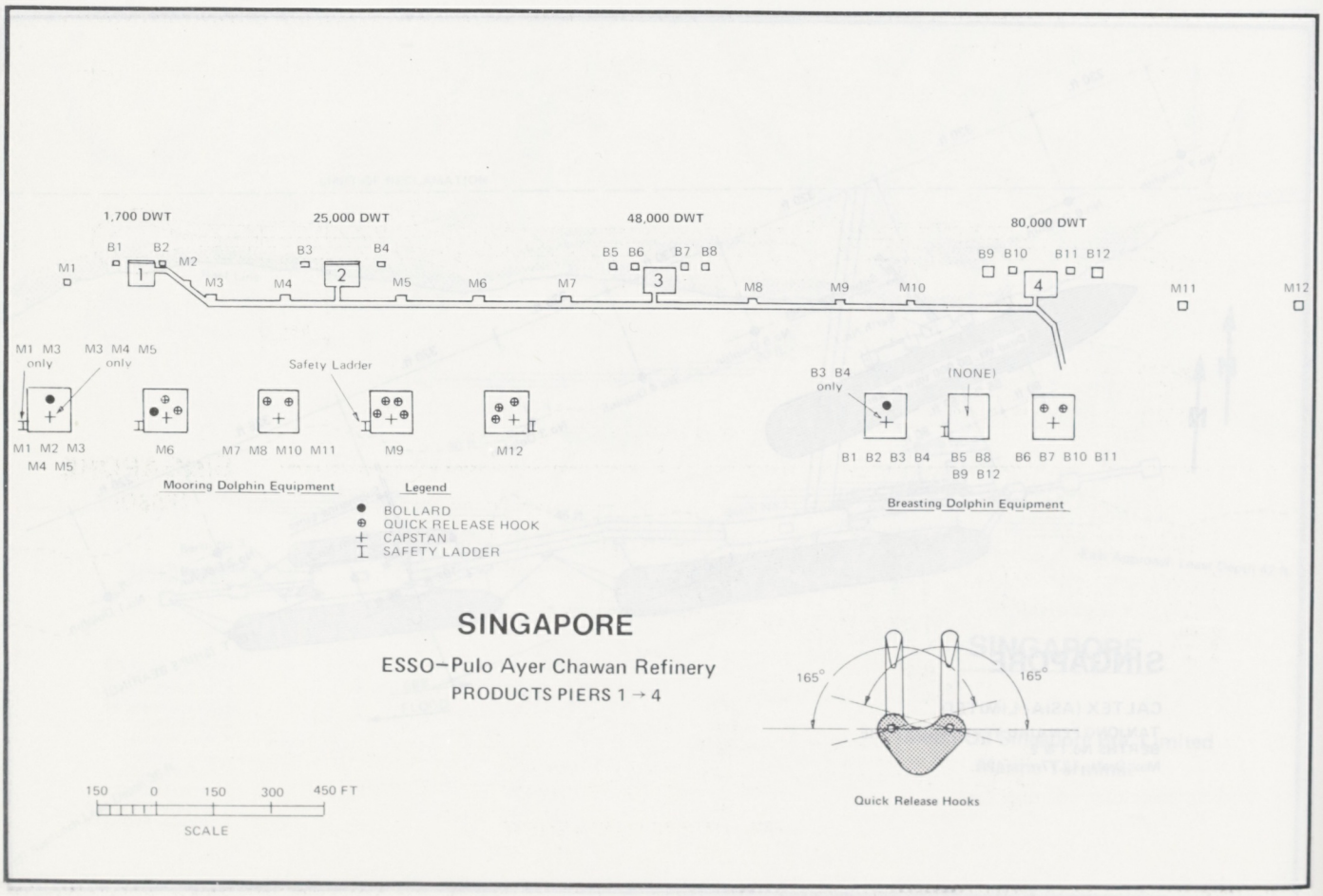

JURONG INDUSTRIAL ESTATE
SRC Jurong Bulk Plant
Jurong Power Station
Esso Terminal
Jurong Wharf
Caltex Terminal
SRC Ramp
T.G. Penjuru
Mobil Refinery
P.Samulun
JTC Pier
P. Damar Laut
SELAT JURONG
SRC Refinery
SRC Oil Handling Dock
P.Mesemut Laut
P.Mesemut Darat
P.Buaya
Pulau Merlimau
P.Pesek
SELAT PESEK
Pulau Seraya
Esso Refinery
P.Ayer Chawan
SELAT A. MERBAU
P. Ayer Merbau
SALAT SAKRA
P.Sakra
P.Bakau
SELAT SINKI
Power Station
Pasir Panjang
BP Refinery
N
SINGAPORE
Singapore Refining Company
SOUTHERN ISLANDS
P.Busong
P.Ular
Shell Refinery
Pulau Bukum
P.Hantu B.
P. Bukum Kechil

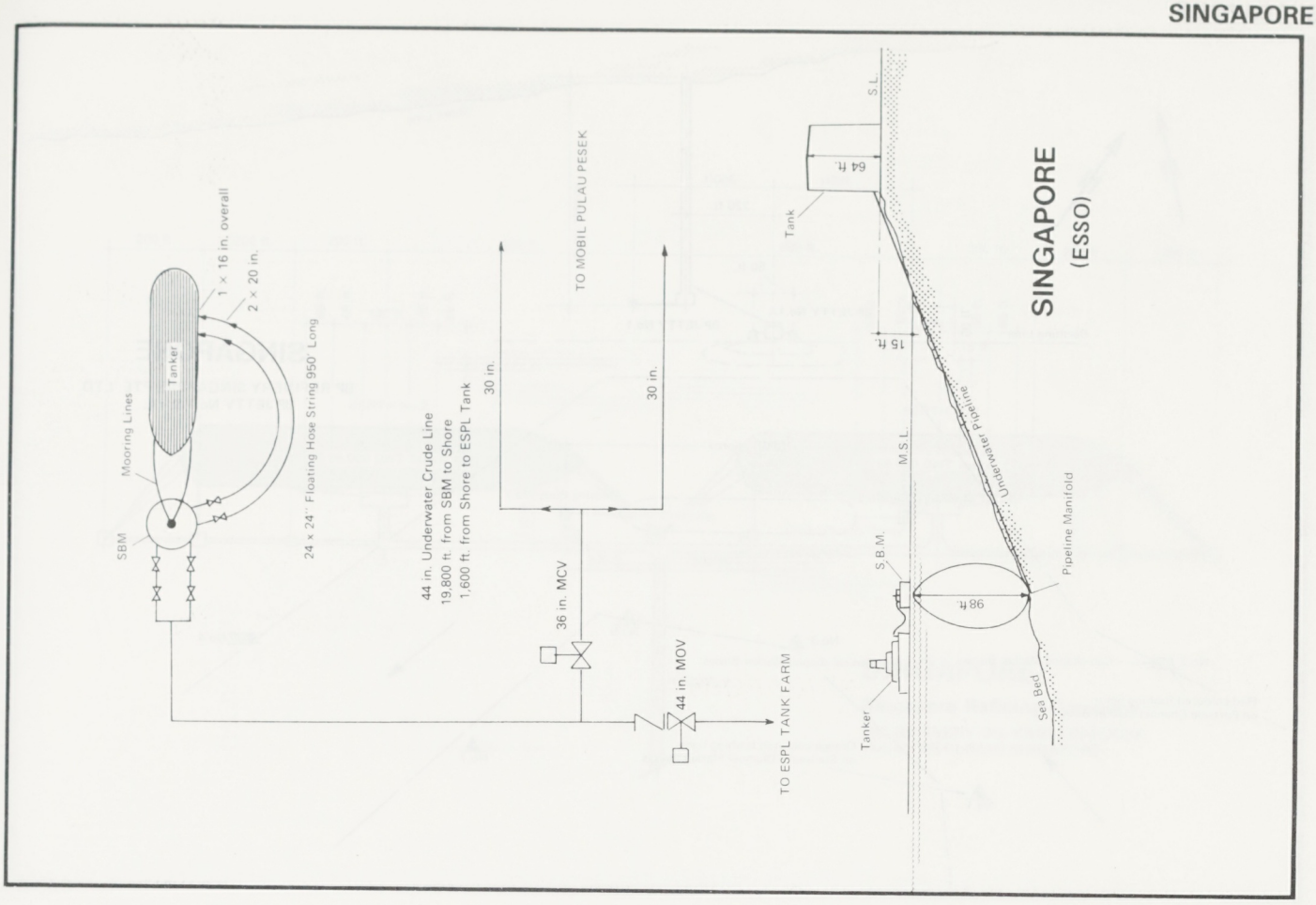

LIMIT OF RECLAMATION
Reef Line
30 ft.
30 ft.
30 ft.
45 ft.
45 ft.
Berth No.4
Berth No.1
Berth No.3
Berth No.2
East Approach Least Depth 42 ft.
N
EBB
FLOOD
West Approach Least Depth 36 ft.
SINGAPORE
Mobil Oil Singapore Pte. Limited
Marine Terminal

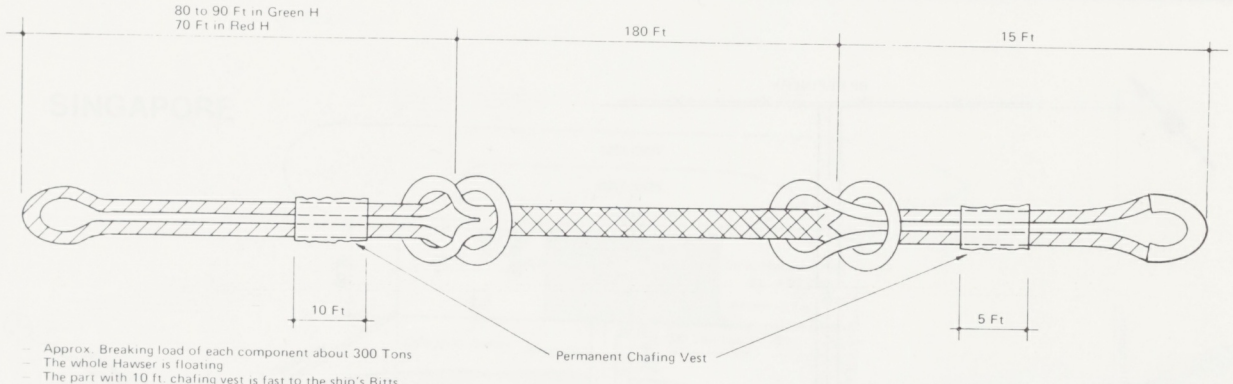

Mooring Dolphin with 7½HP Capstan
Personnel Walkway
Breasting Dolphin
Approach Bridge
5,000 DWT Tanker
Boundary of sea bed lease
85,000 DWT Tanker
16,000
Hose rack steel tower
Wharf House
Breasting Dolphin
Personnel Walkway
Mooring Dolphin with 7½ HP Capstan
Boundary of sea bed lease
Edge of kerb
Approach road (5.18 wide)
Boundary of sea bed lease
Pipe corridor
Penjuru Road
Shore line
INE Fence
road
AP1 Oil Separator
Transfer Pit No. 1
SINGAPORE
(GATX TERMINAL)
0 100 200 FEET
0 50 METRES
SCALE


230 ft.
320 ft.
320 ft.
230 ft.
230 ft.
320 ft.
325 ft.
225 ft.
No.7 Dolphin
No.6 Dolphin
No.5 Dolphin
No.4 Dolphin
No.3 Dolphin
No.2 Dolphin
No.1 Dolphin
Submarine Lines
Berth No.1
Dead Wt. 50,000 tons tanker
80 ft.
55 ft.
57 ft.
80 ft.
N
1,100 ft.
Submarine Lines
Berth No.2
102 ft.
98 ft.
295°T
115°T (SHIP'S BEARING)
SINGAPORE
CALTEX (ASIA) LIMITED
TANJONG PENJURU TERMINAL S'PORE
BERTHS No.1 & 2
Max Draft: 12.77m or 42ft.


JOHOR
Pulu Kukup
Port Limit
MALACCA STRAIT
Entrance to
JOHORE STRAIT
West Jurong Anchorage
West Jurong
Petroleum
Anchorage
Sultan Shoal
Sultan Shoal
Quarantine &
Immigration
Anchorage
Recommended routes for
eastbound loaded VLCC
118°
120°
The Brothers
Singapore pilots
West Station
Port Limit
SINGAPORE


1,700 DWT
25,000 DWT
48,000 DWT
80,000 DWT
B1 B2
B3 B4
B5 B6 B7 B8
B9 B10 B11 B12
M1
M2
M3
M4
M5
M6
M7
M8
M9
M10
M11
M12
1
2
3
4
M1 M3
only
M3 M4 M5
only
M1 M2 M3
M4 M5
M6
Safety Ladder
M7 M8 M10 M11
M9
M12
Mooring Dolphin Equipment
Legend
BOLLARD
QUICK RELEASE HOOK
CAPSTAN
SAFETY LADDER
B3 B4
only
(NONE)
B1 B2 B3 B4
B5 B8
B9 B12
B6 B7 B10 B11
Breasting Dolphin Equipment
SINGAPORE
ESSO–Pulo Ayer Chawan Refinery
PRODUCTS PIERS 1 → 4
150 0 150 300 450 FT
SCALE
165°
165°
Quick Release Hooks



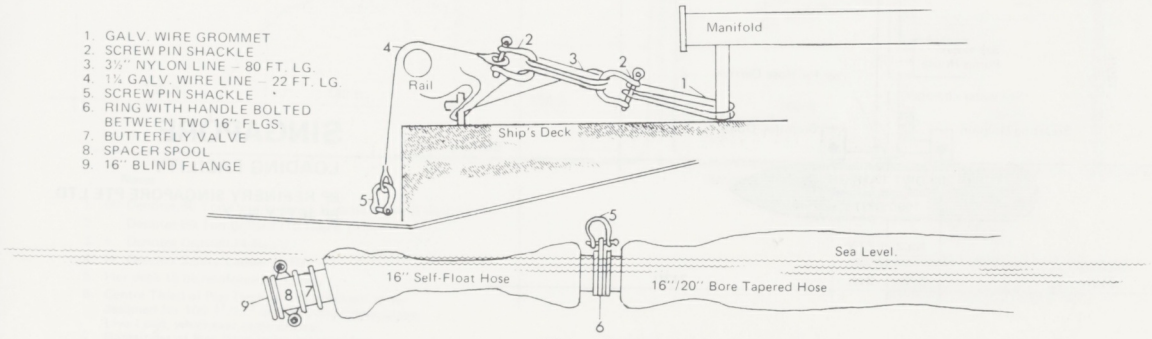


- Approx. Breaking load of each component about 300 Tons
- The whole Hawser is floating
- The part with 10 ft. chafing vest is fast to the ship's Bitts.
- The Hawsers are stored between two Buoys (Floating behind PAC Dock 4) when the interval between operation is long.

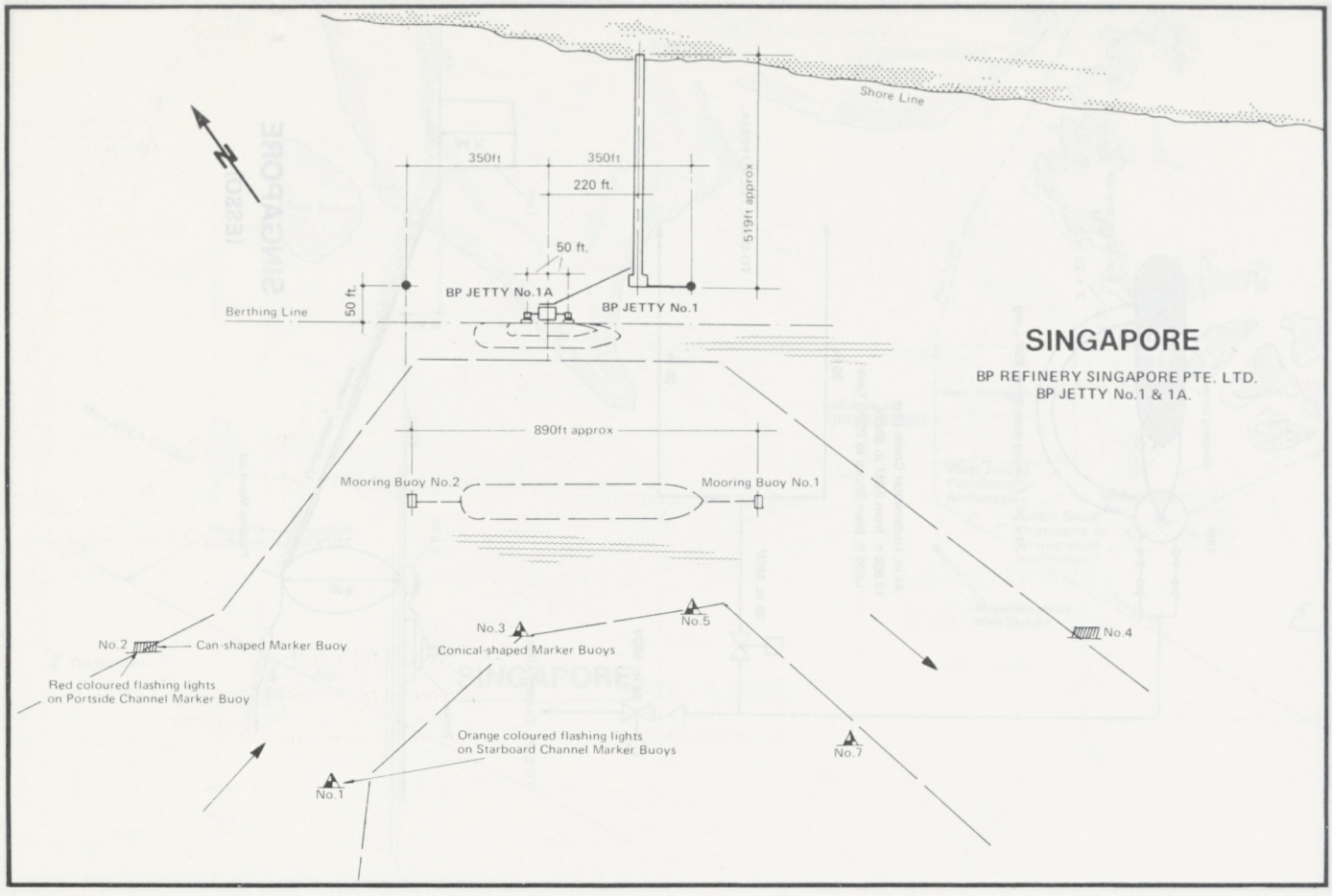
BOW HAWSERS – Sketch of mooring arrangement.

SINGAPORE
(ESSO)

1. GALV. WIRE GROMMET
2. SCREW PIN SHACKLE
3. 3½" NYLON LINE – 80 FT. LG.
4. 1¼ GALV. WIRE LINE – 22 FT. LG.
5. SCREW PIN SHACKLE
6. RING WITH HANDLE BOLTED BETWEEN TWO 16" FLGS.
7. BUTTERFLY VALVE
8. SPACER SPOOL
9. 16" BLIND FLANGE

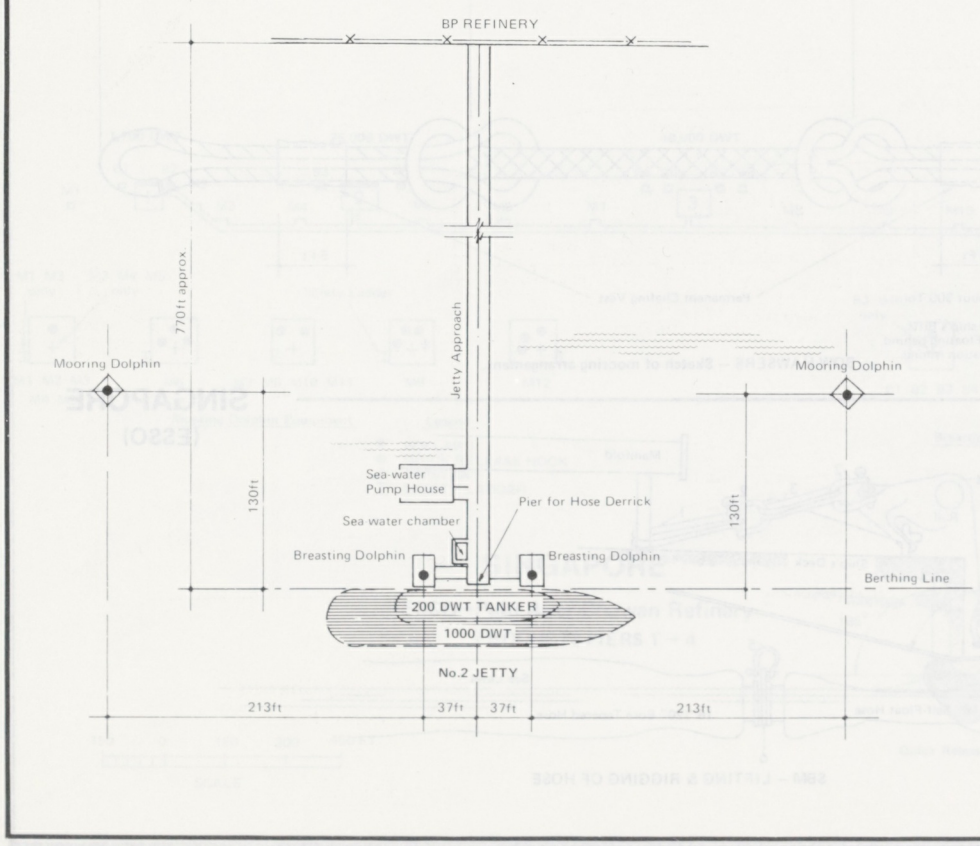


SBM – LIFTING & RIGGING OF HOSE



SINGAPORE

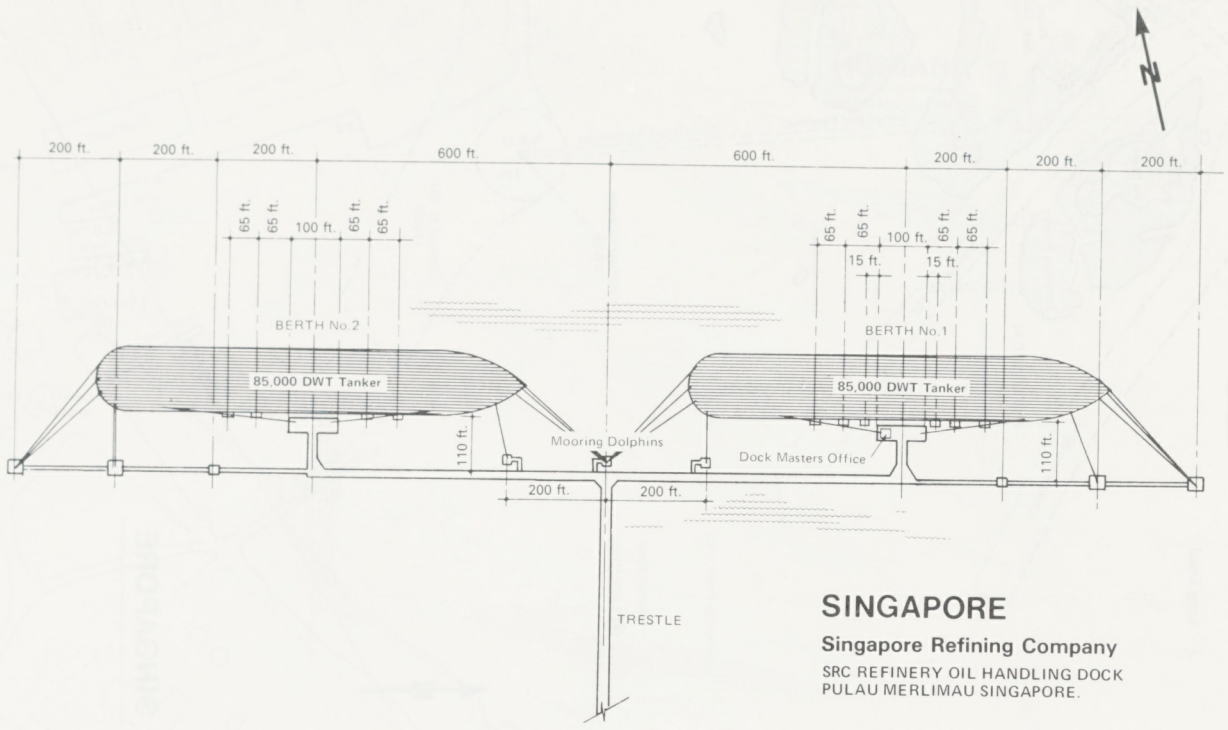
BP REFINERY SINGAPORE PTE. LTD.
BP JETTY No.1 & 1A.



SINGAPORE

LOADING FACILITY

BP REFINERY SINGAPORE PTE LTD.
BP JETTY No.2

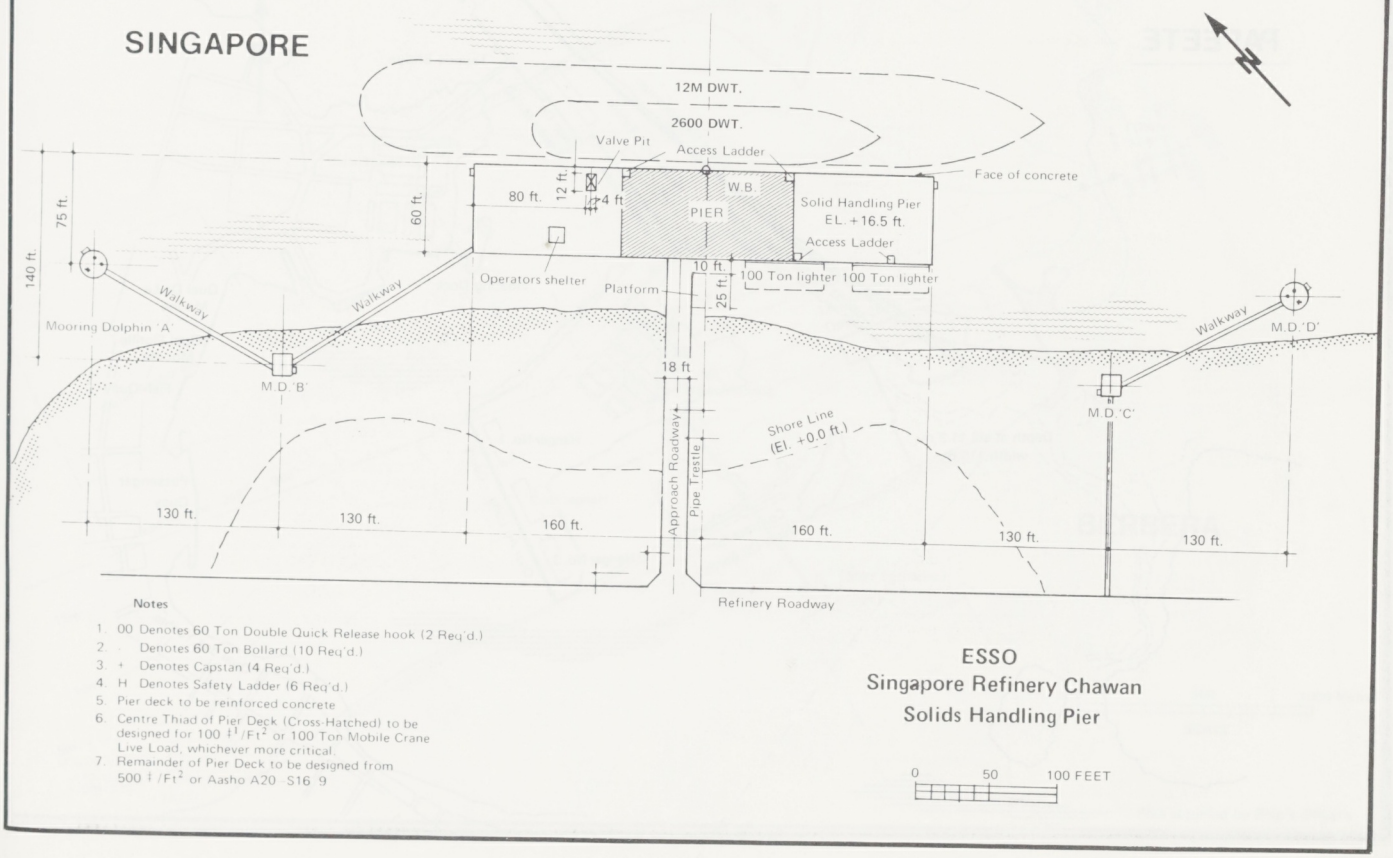


SINGAPORE

Singapore Refining Company

SRC REFINERY OIL HANDLING DOCK
PULAU MERLIMAU SINGAPORE.

SINGAPORE

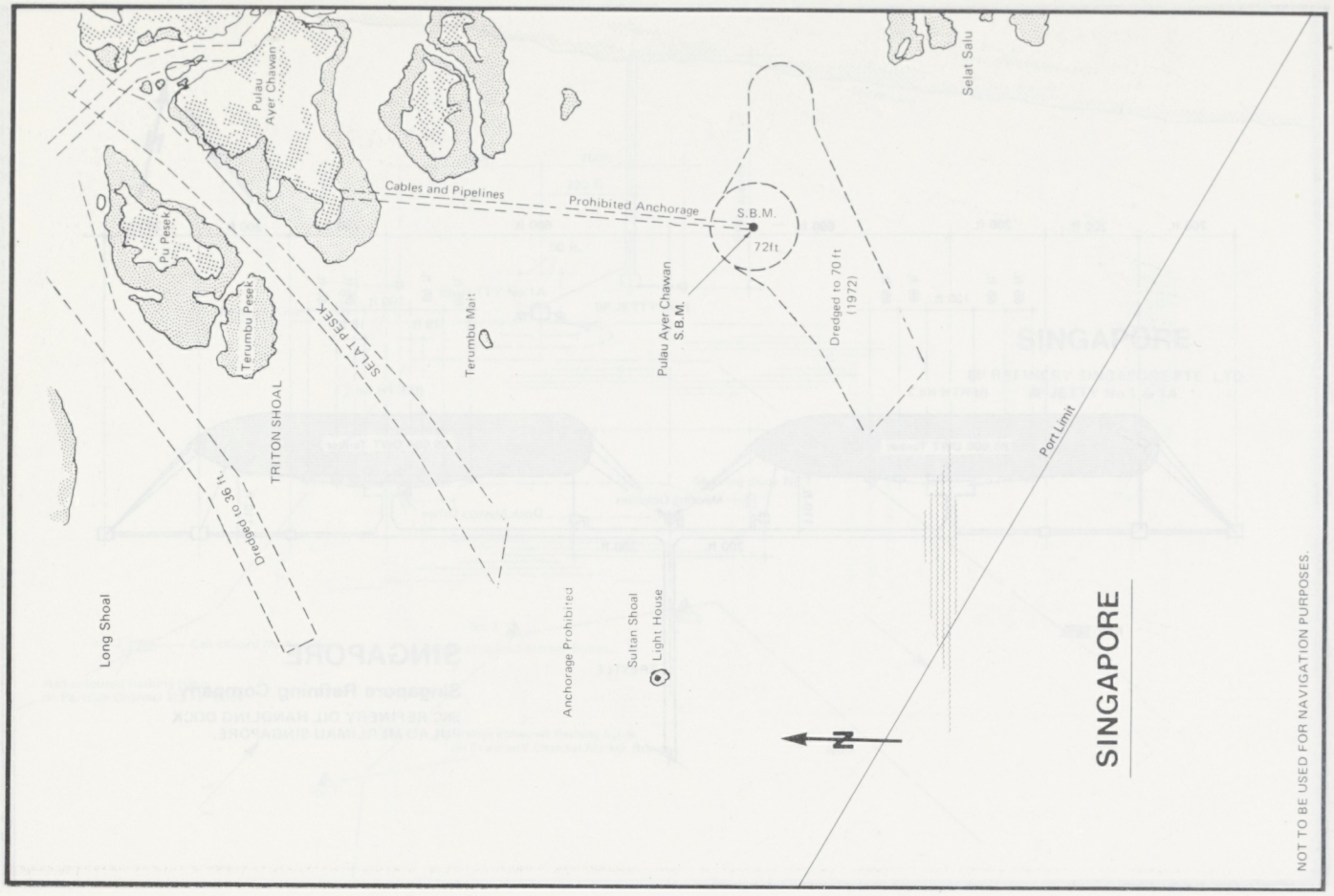


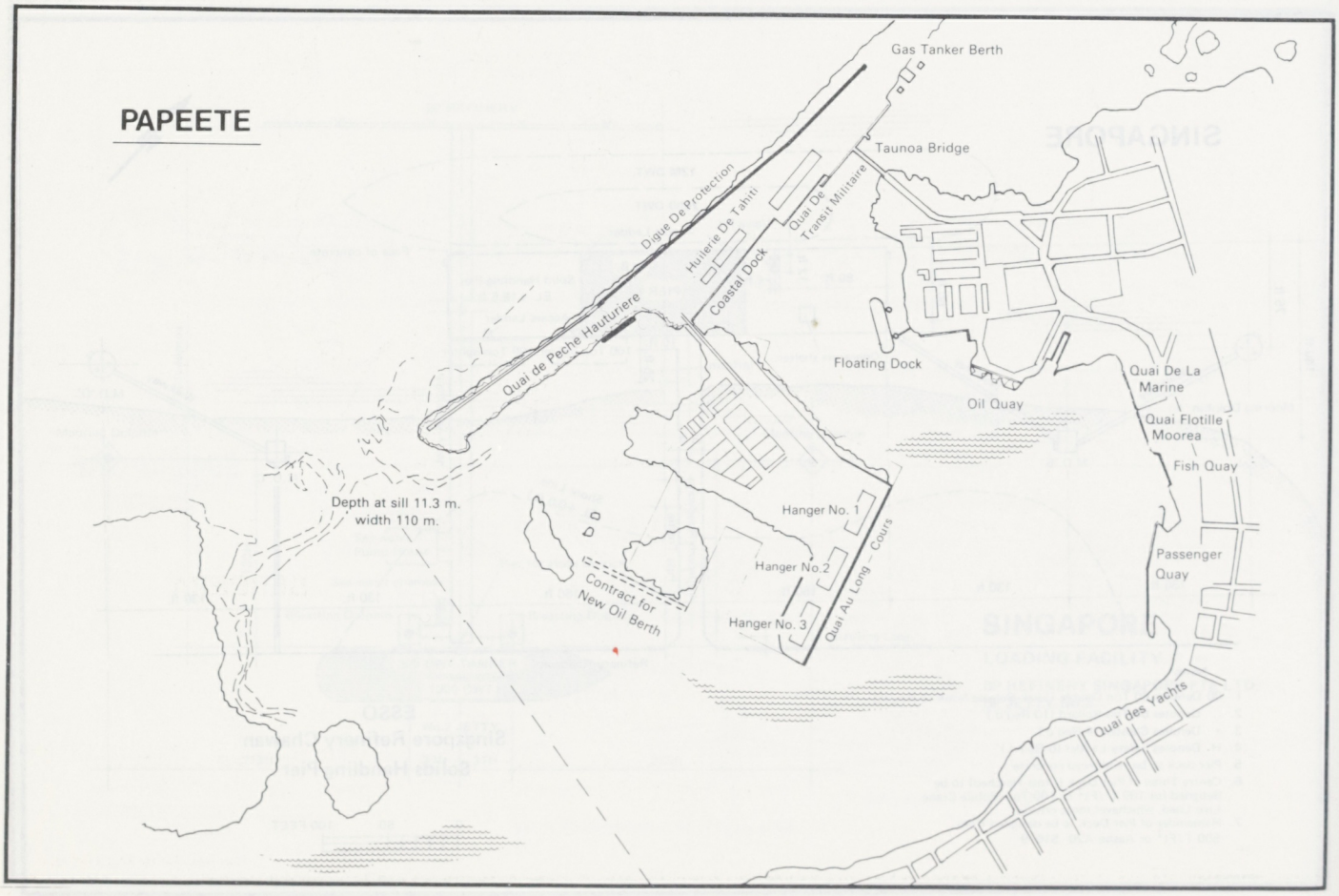
Notes

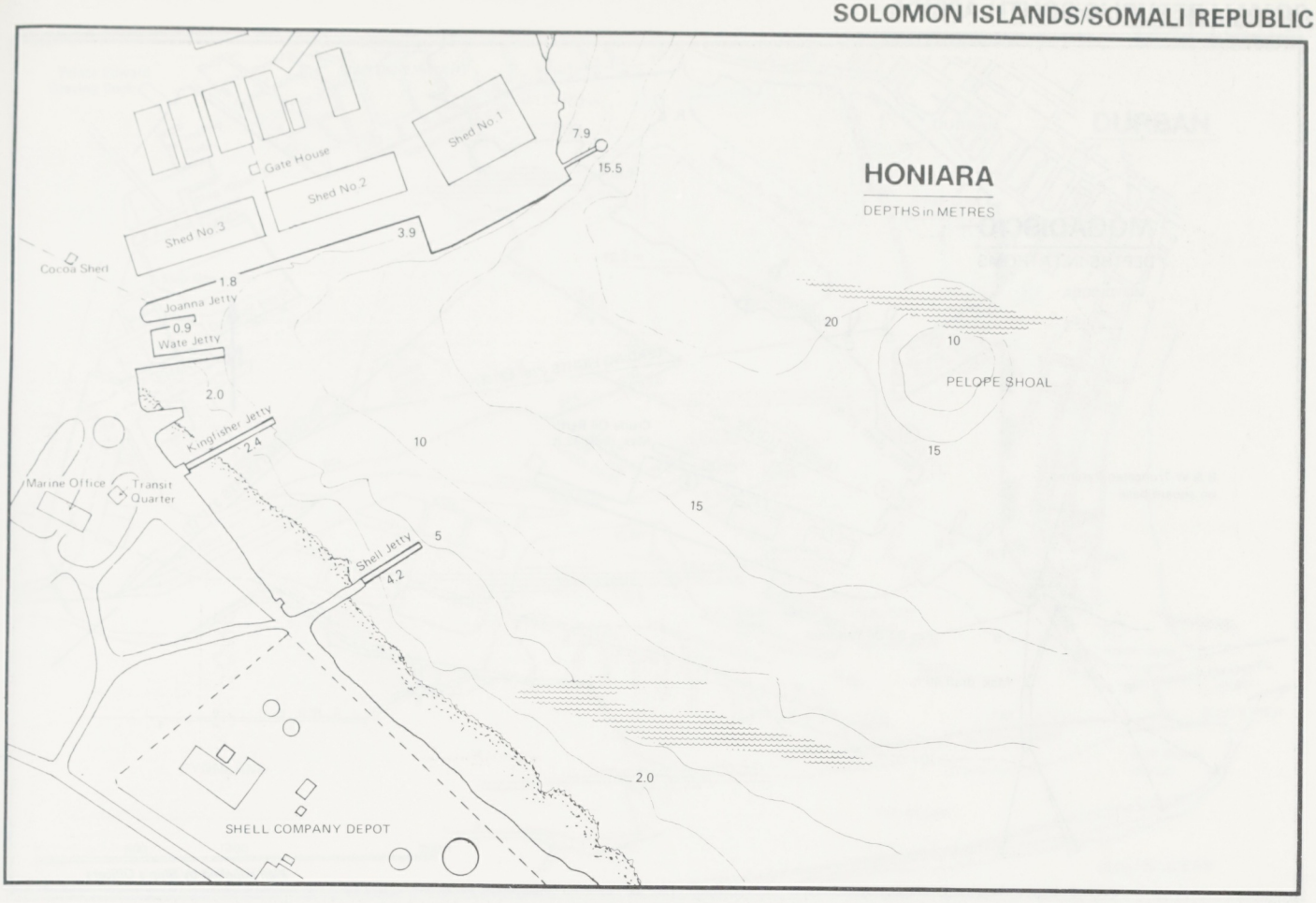
1. 00 Denotes 60 Ton Double Quick Release hook (2 Req'd.)
2. Denotes 60 Ton Bollard (10 Req'd.)
3. + Denotes Capstan (4 Req'd.)
4. H Denotes Safety Ladder (6 Req'd.)
5. Pier deck to be reinforced concrete
6. Centre Thiad of Pier Deck (Cross-Hatched) to be designed for 100 $\ddagger^1/Ft^2$ or 100 Ton Mobile Crane Live Load, whichever more critical.
7. Remainder of Pier Deck to be designed from 500 $\ddagger/Ft^2$ or Aasho A20 - S16 '9

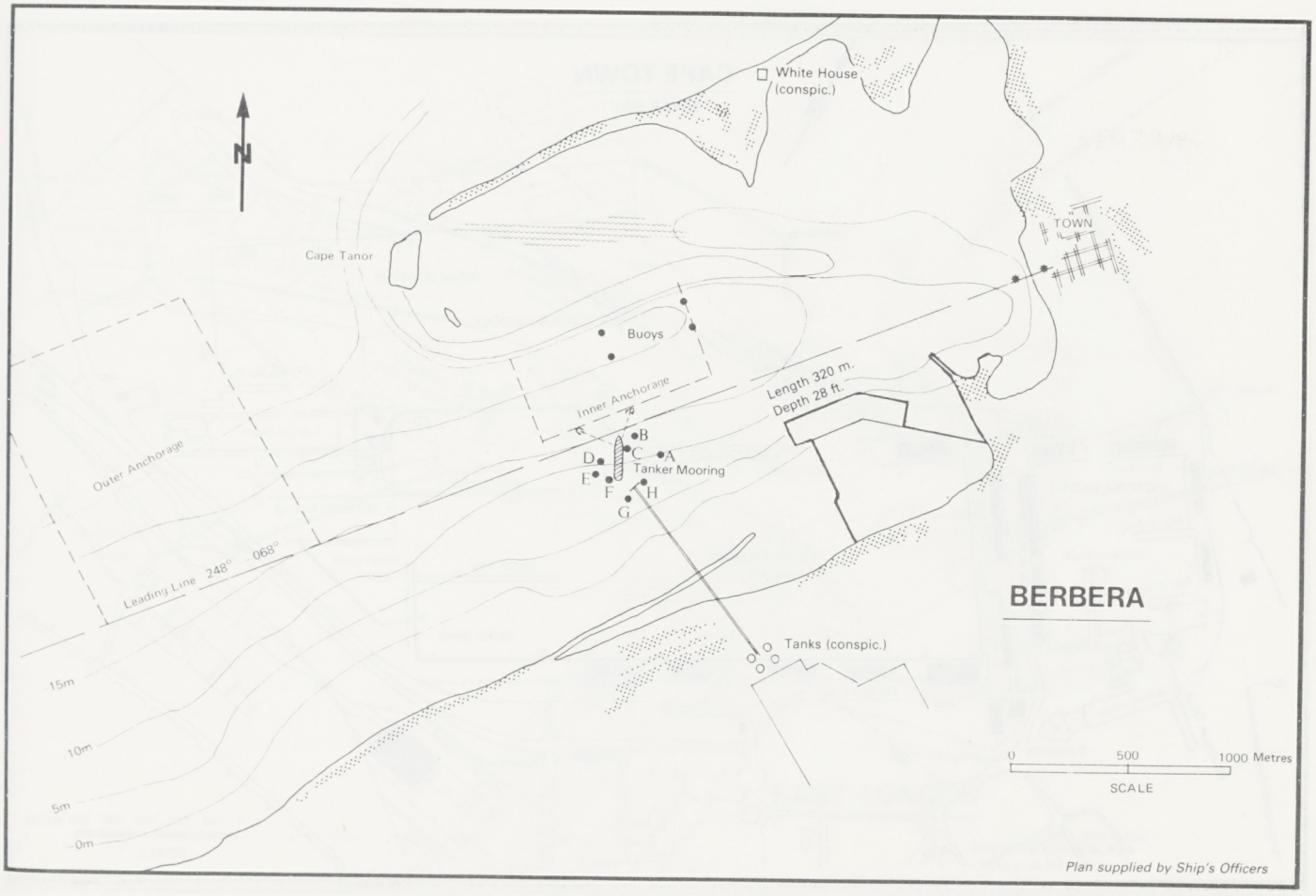
ESSO
Singapore Refinery Chawan
Solids Handling Pier

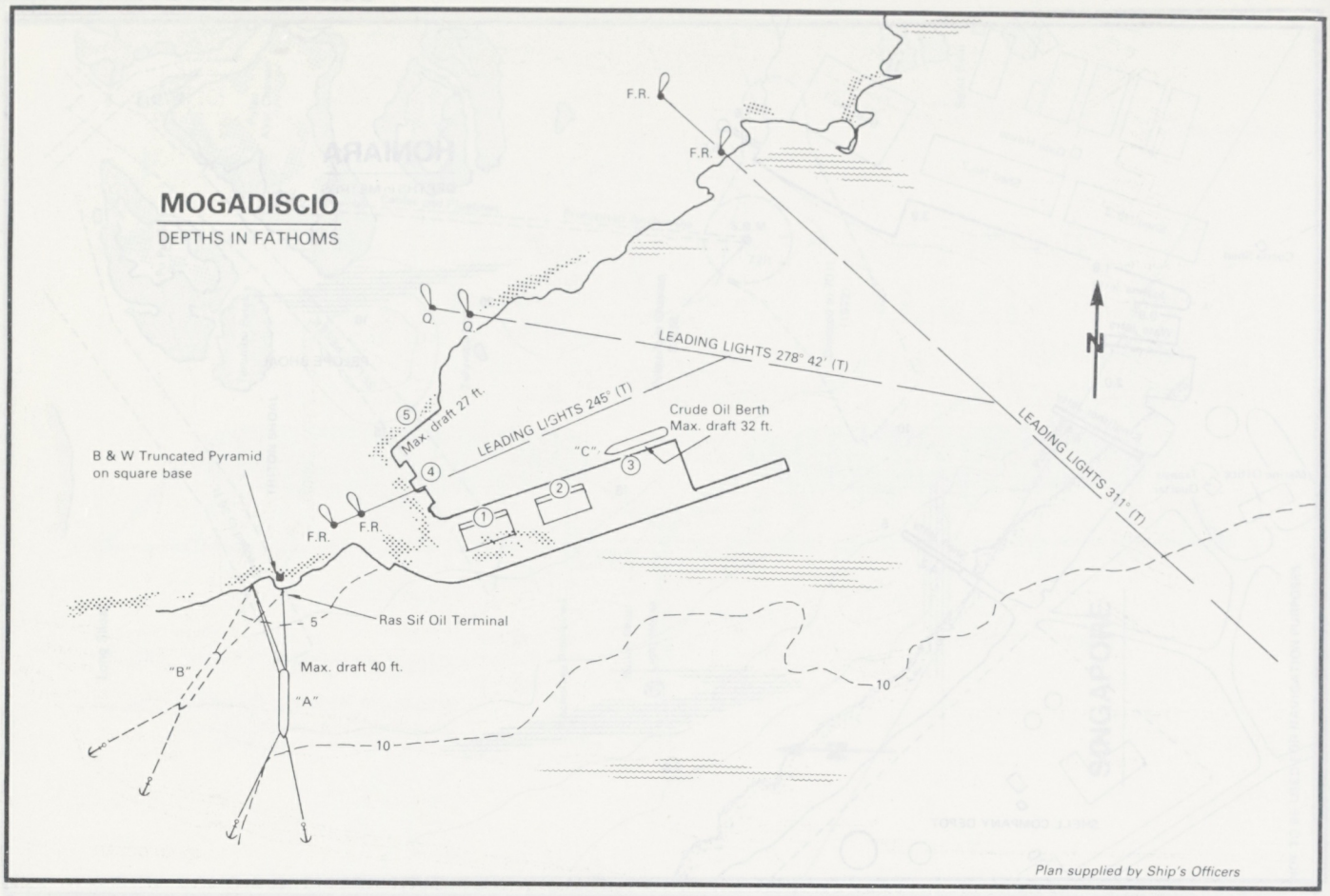
0 50 100 FEET

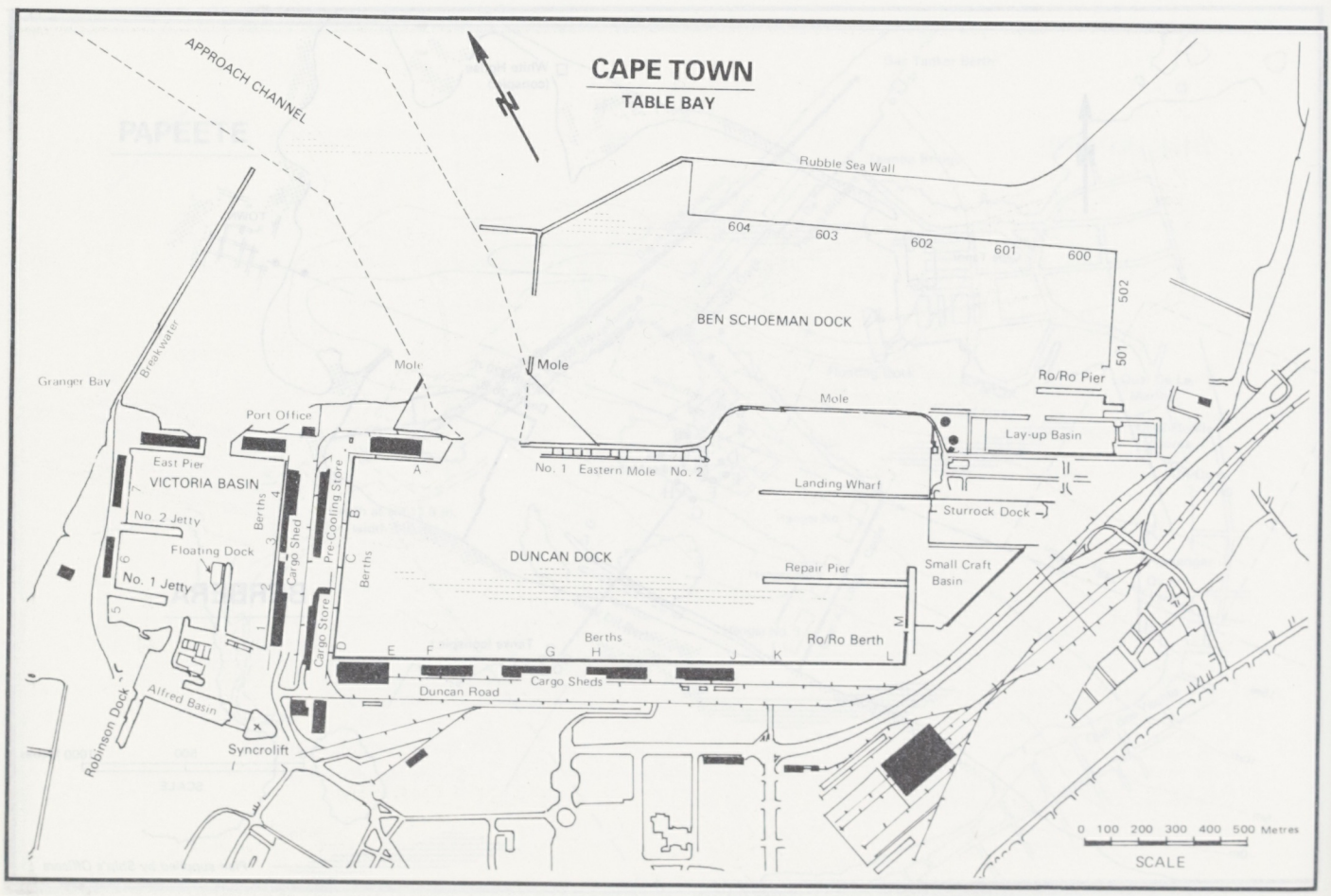

Pulau Ayer Chawan
Selat Salu
Cables and Pipelines
Prohibited Anchorage
S.B.M.
72ft
Pu Pesek
Terumbu Pesek
SELAT PESEK
Terumbu Mati
Pulau Ayer Chawan S.B.M.
Dredged to 70 ft (1972)
TRITON SHOAL
Dredged to 36 ft
Port Limit
Long Shoal
Anchorage Prohibited
Sultan Shoal
Light House
N
SINGAPORE
NOT TO BE USED FOR NAVIGATION PURPOSES.

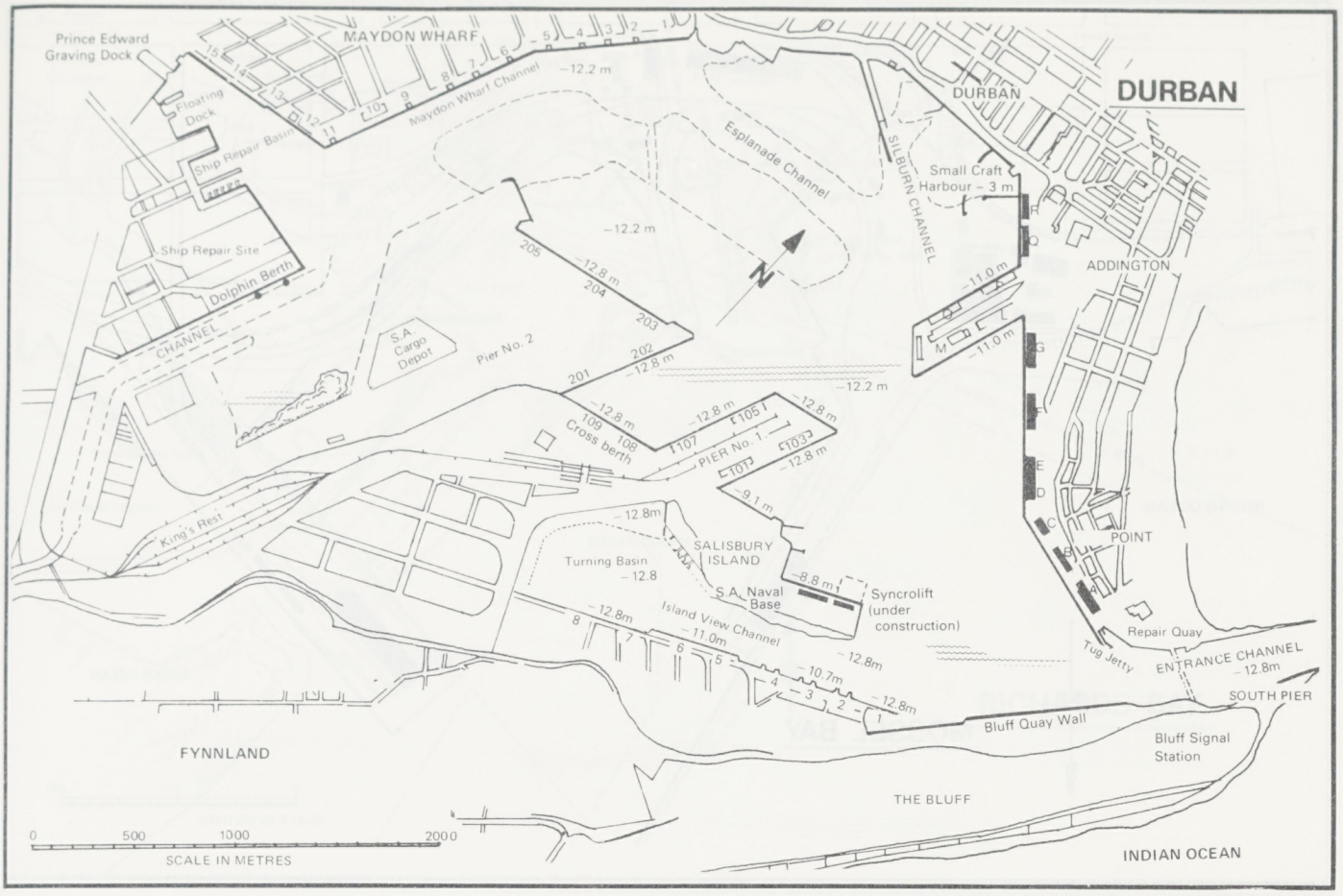

PAPEETE
Gas Tanker Berth
Taunoa Bridge
Digue De Protection
Huilerie De Tahiti
Quai De Transit Militaire
Coastal Dock
Quai de Peche Hauturiere
Floating Dock
Quai De La Marine
Oil Quay
Quai Flotille Moorea
Fish Quay
Depth at sill 11.3 m.
width 110 m.
Hanger No. 1
Hanger No.2
Hanger No. 3
Contract for New Oil Berth
Quai Au Long Cours
Passenger Quay
Quai des Yachts

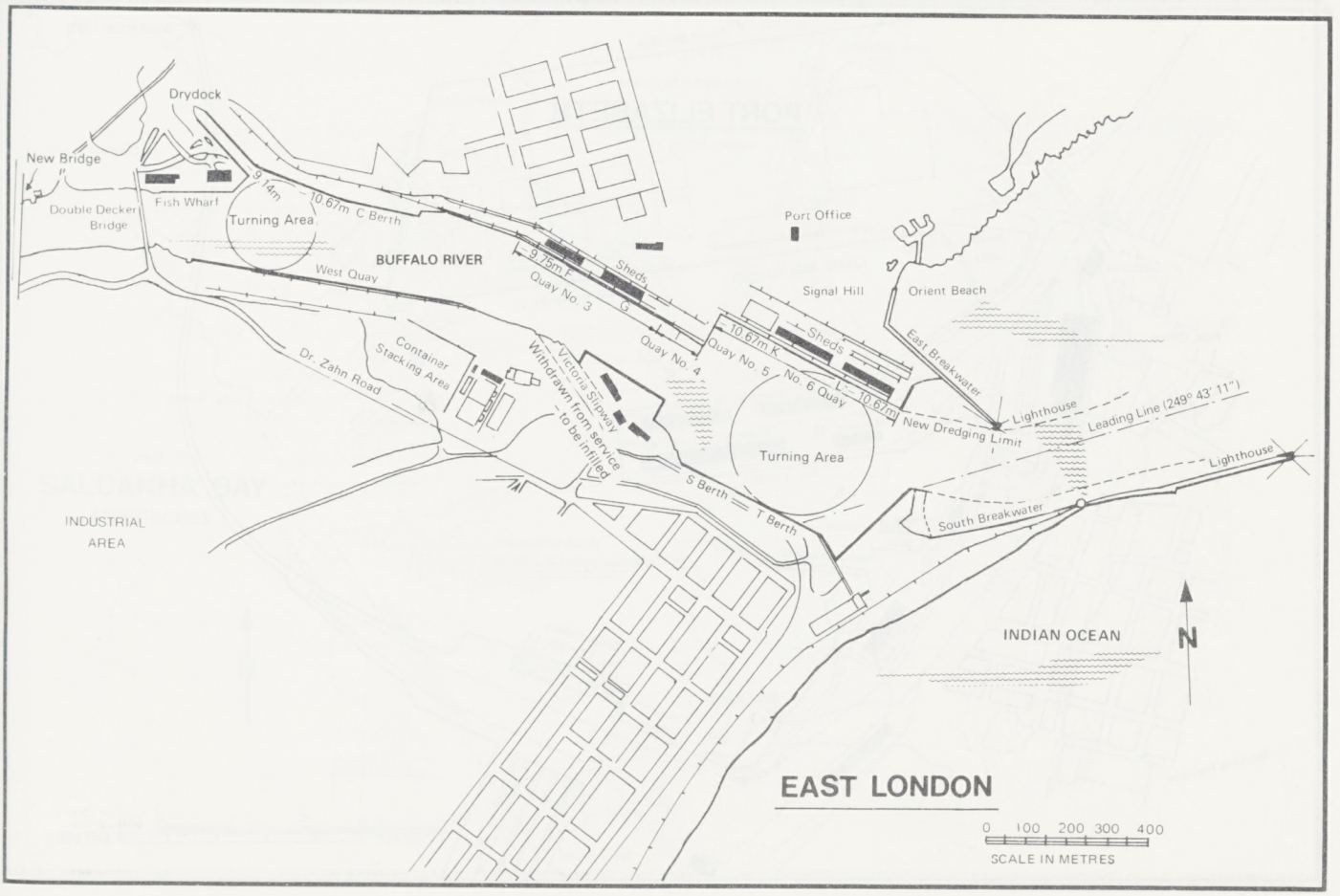

HONIARA
DEPTHS in METRES
Shed No.1
Gate House
Shed No.2
Shed No.3
Cocoa Shed
Joanna Jetty
Wate Jetty
Kingfisher Jetty
Marine Office
Transit Quarter
Shell Jetty
SHELL COMPANY DEPOT
PELOPE SHOAL
7.9
15.5
3.9
1.8
0.9
2.0
2.4
4.2
5
10
15
20
2.0

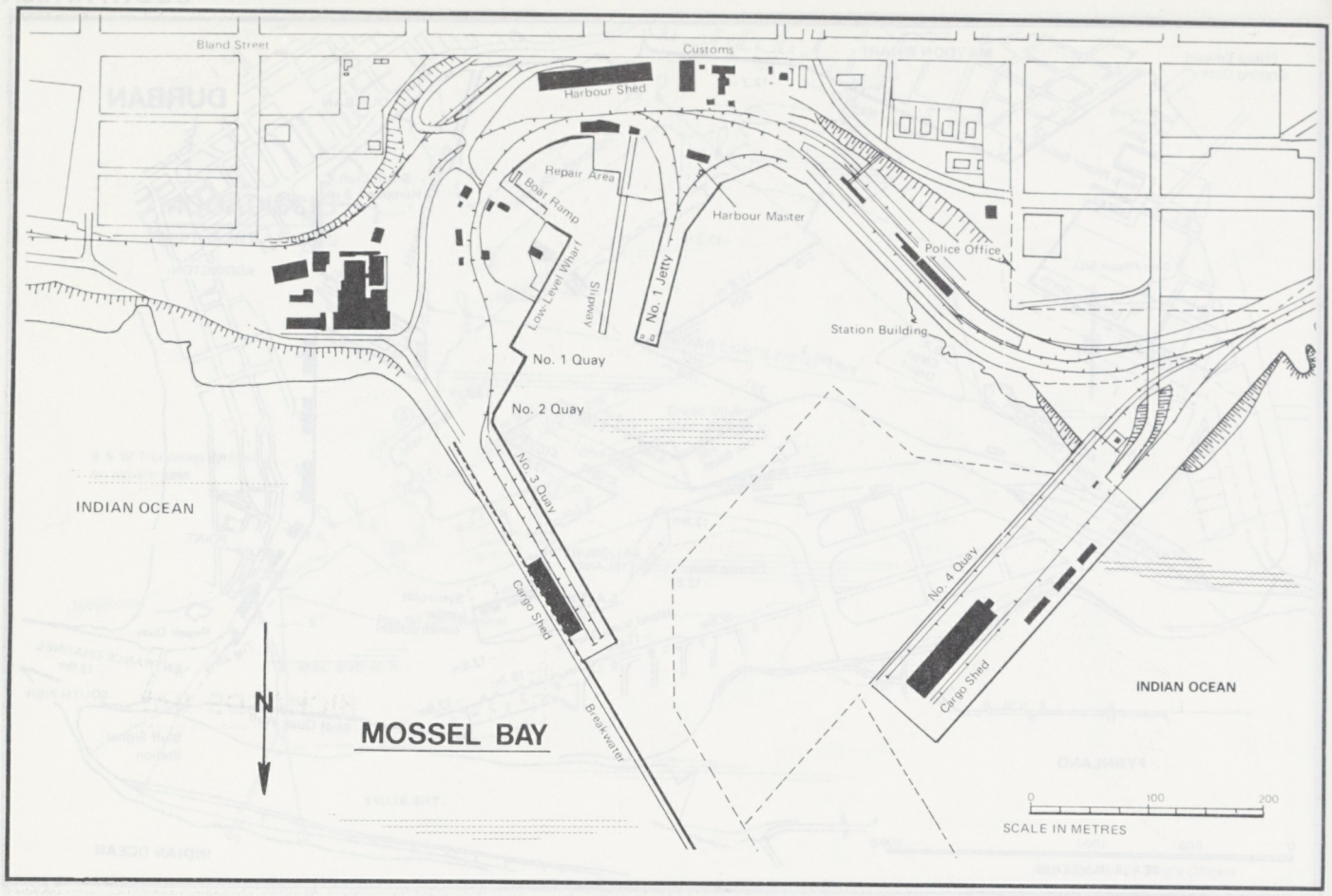

N
White House (conspic.)
TOWN
Cape Tanor
Buoys
Inner Anchorage
Length 320 m.
Depth 28 ft.
Outer Anchorage
Tanker Mooring
A
B
C
D
E
F
G
H
Leading Line 248° 068°
Tanks (conspic.)
BERBERA
15m
10m
5m
0m
0
500
1000 Metres
SCALE
Plan supplied by Ship's Officers

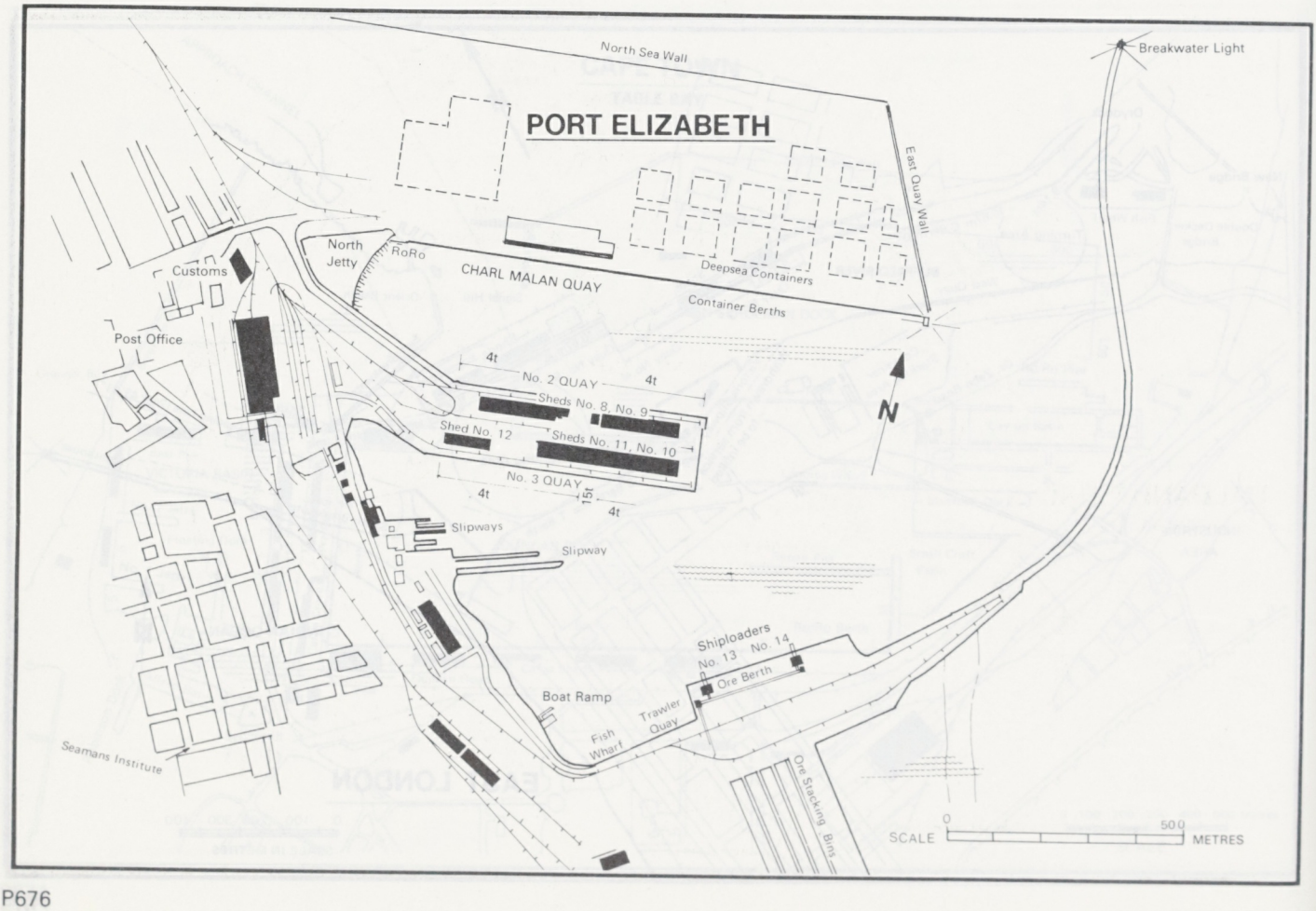

MOGADISCIO
DEPTHS IN FATHOMS
F.R.
F.R.
Q.
Q.
LEADING LIGHTS 278° 42' (T)
LEADING LIGHTS 245° (T)
LEADING LIGHTS 311° (T)
Max. draft 27 ft.
Crude Oil Berth
Max. draft 32 ft.
"C"
B & W Truncated Pyramid
on square base
F.R.
F.R.
Ras Sif Oil Terminal
Max. draft 40 ft.
"B"
"A"
5
10
10
N
Plan supplied by Ship's Officers

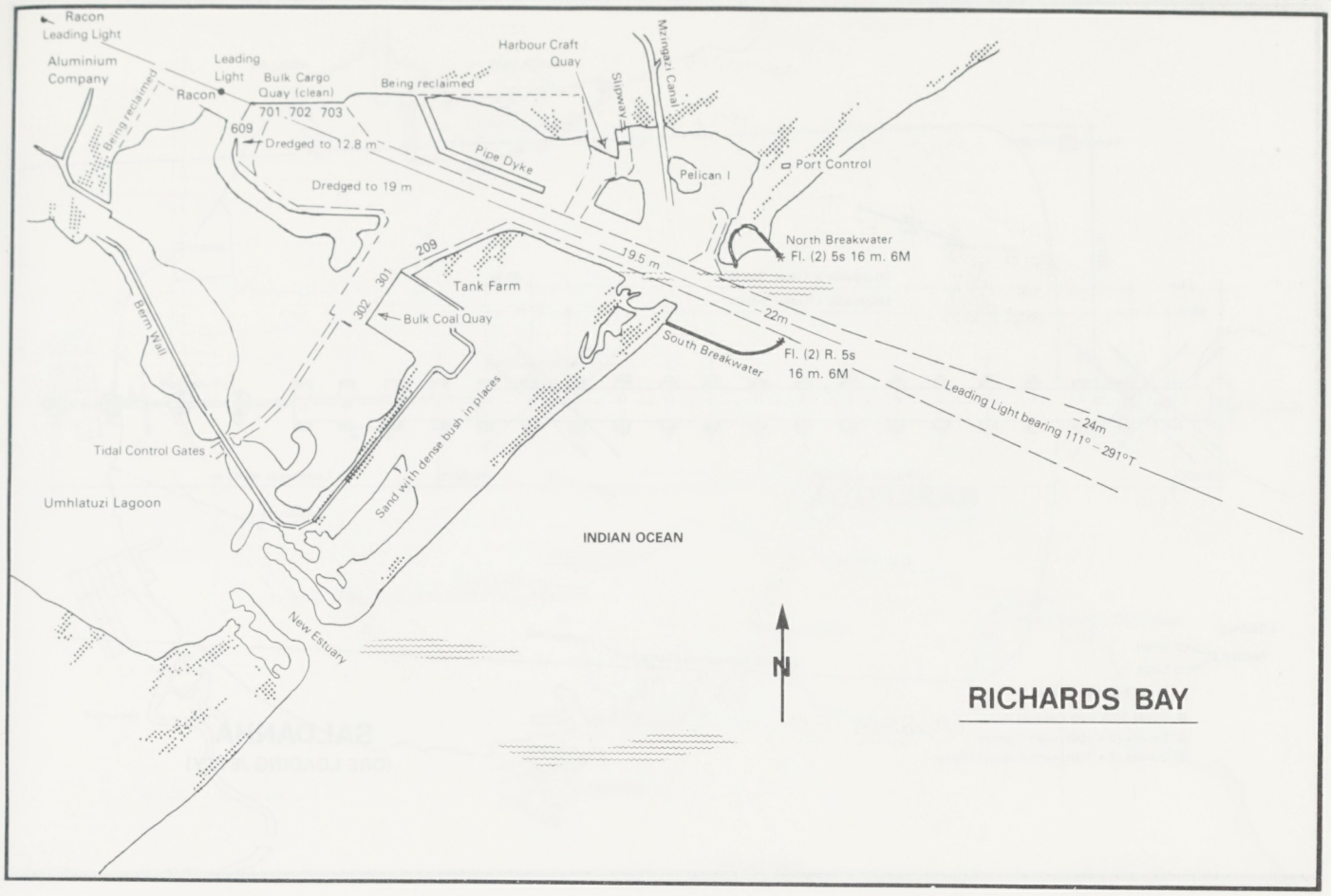

CAPE TOWN
TABLE BAY
APPROACH CHANNEL
N
Rubble Sea Wall
604
603
602
601
600
502
501
BEN SCHOEMAN DOCK
Granger Bay
Breakwater
Mole
Mole
Ro/Ro Pier
Mole
Port Office
East Pier
VICTORIA BASIN
No. 2 Jetty
Floating Dock
No. 1 Jetty
Berths
Cargo Shed
Pre-Cooling Store
Cargo Store
Berths
No. 1 Eastern Mole
No. 2
Lay-up Basin
Landing Wharf
Sturrock Dock
DUNCAN DOCK
Repair Pier
Small Craft
Basin
Berths
Ro/Ro Berth
Duncan Road
Cargo Sheds
Robinson Dock
Alfred Basin
Syncrolift
0 100 200 300 400 500 Metres
SCALE

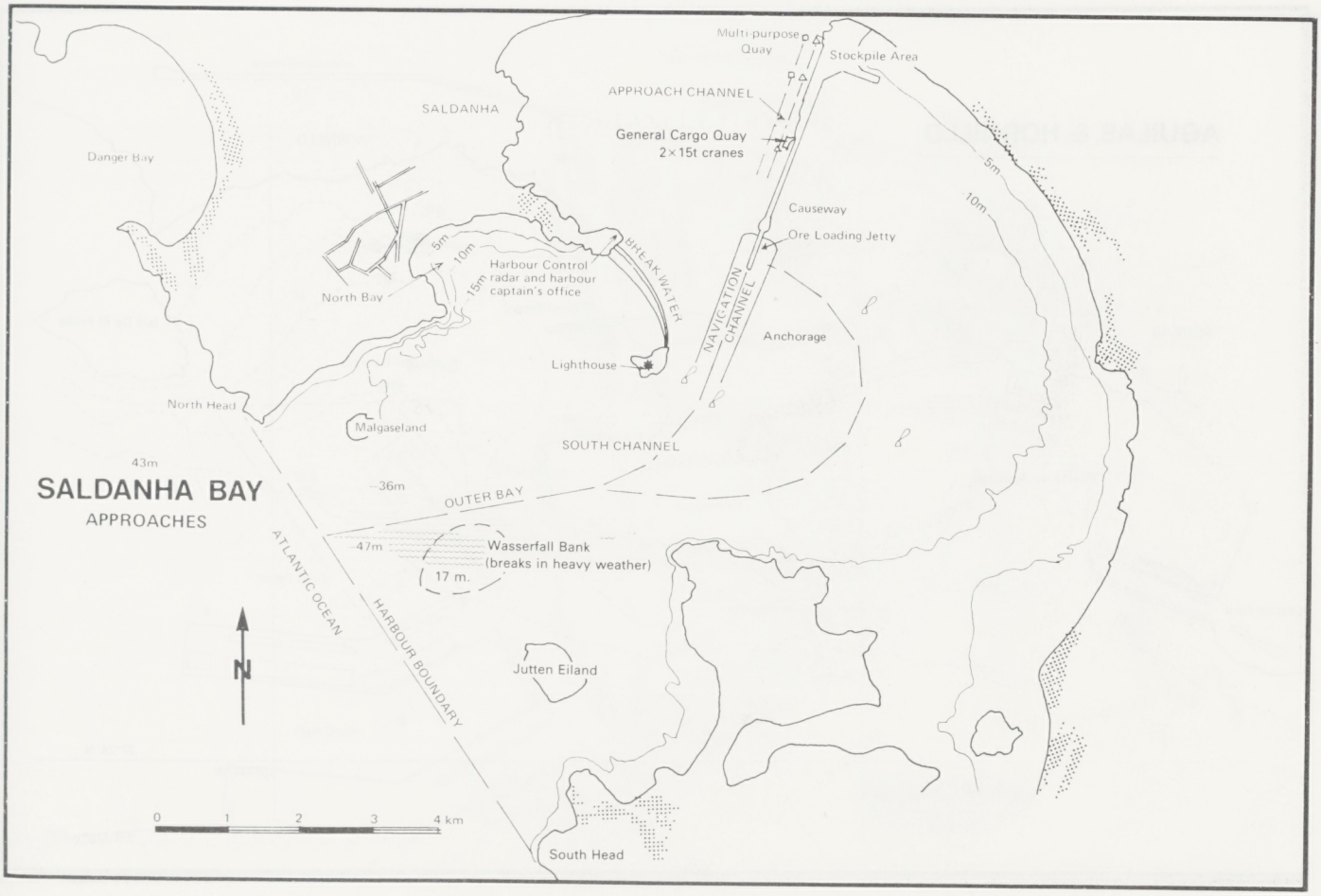

Prince Edward Graving Dock
MAYDON WHARF
Maydon Wharf Channel
Floating Dock
Ship Repair Basin
Ship Repair Site
Dolphin Berth
CHANNEL
S.A. Cargo Depot
Pier No. 2
Esplanade Channel
DURBAN
DURBAN
SILBURN CHANNEL
Small Craft Harbour - 3 m
ADDINGTON
POINT
Repair Quay
Tug Jetty
ENTRANCE CHANNEL
SOUTH PIER
Bluff Quay Wall
Bluff Signal Station
PIER No. 1
Cross berth
SALISBURY ISLAND
Turning Basin
S.A. Naval Base
Syncrolift (under construction)
Island View Channel
King's Rest
FYNNLAND
THE BLUFF
INDIAN OCEAN
SCALE IN METRES

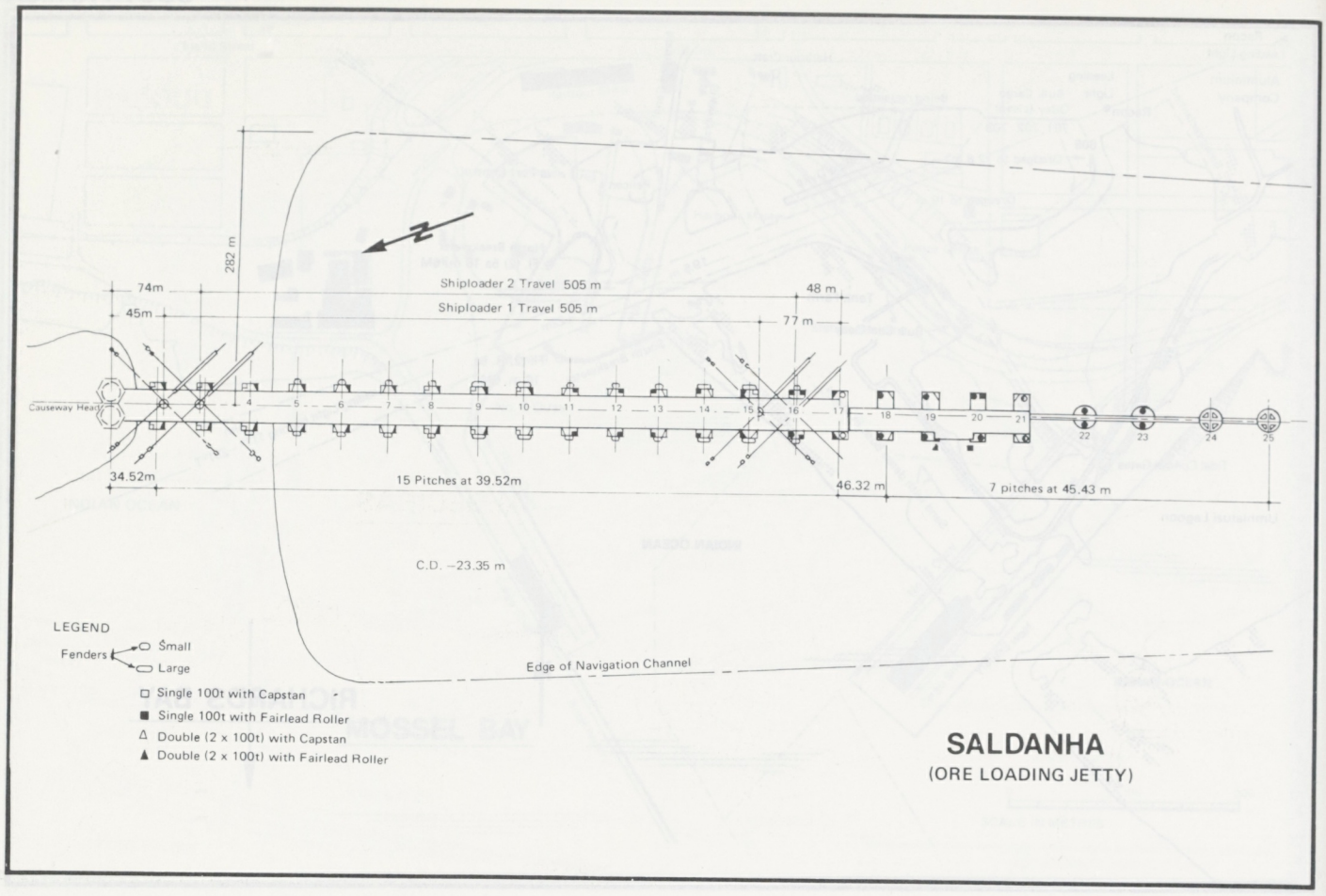

Drydock
New Bridge
Double Decker Bridge
Fish Wharf
Turning Area
BUFFALO RIVER
West Quay
Container Stacking Area
Dr. Zahn Road
Victoria Slipway
Withdrawn from service
to be infilled
Quay No. 3
Quay No. 4
Quay No. 5
No. 6 Quay
Sheds
Port Office
Signal Hill
Orient Beach
East Breakwater
Lighthouse
New Dredging Limit
Leading Line (249° 43' 11")
Turning Area
S Berth
T Berth
South Breakwater
INDUSTRIAL AREA
INDIAN OCEAN
EAST LONDON
SCALE IN METRES

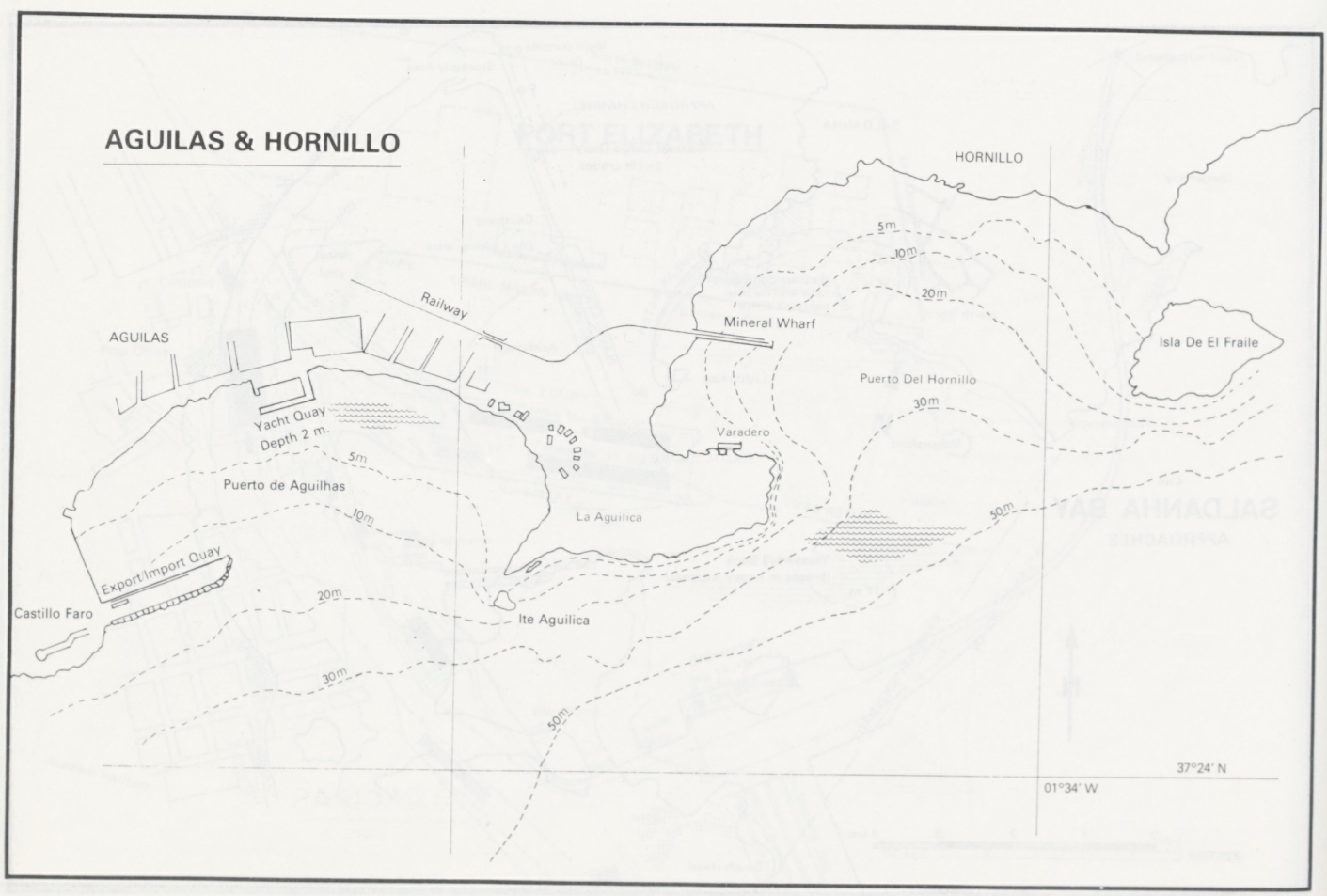

Bland Street
Customs
Harbour Shed
Repair Area
Boat Ramp
Low-Level Wharf
Slipway
No. 1 Jetty
Harbour Master
Police Office
Station Building
No. 1 Quay
No. 2 Quay
No. 3 Quay
INDIAN OCEAN
Cargo Shed
Breakwater
N
MOSSEL BAY
No. 4 Quay
Cargo Shed
INDIAN OCEAN
0
100
200
SCALE IN METRES

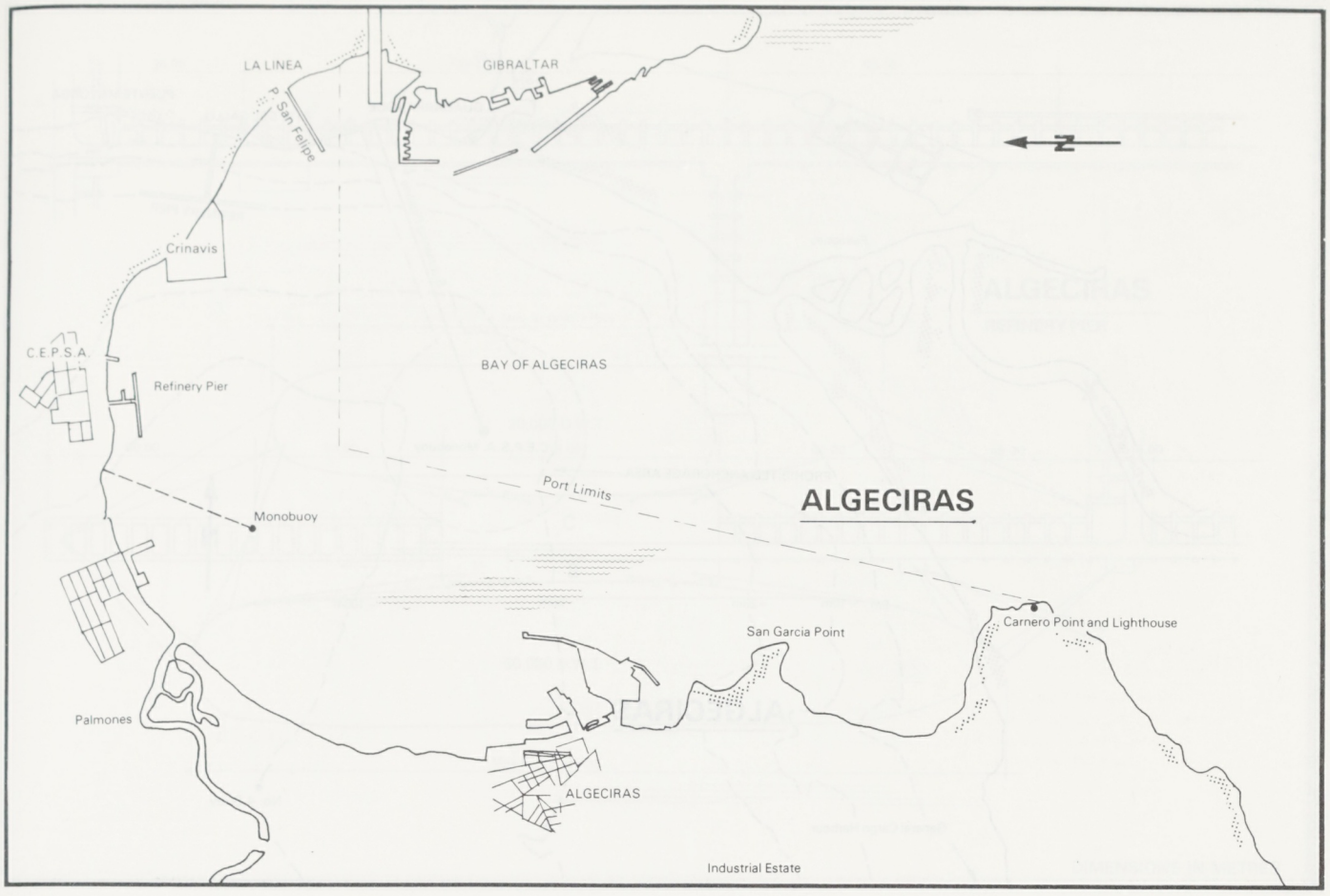

North Sea Wall
Breakwater Light
PORT ELIZABETH
East Quay Wall
North Jetty
RoRo
CHARL MALAN QUAY
Deepsea Containers
Container Berths
Customs
Post Office
4t
No. 2 QUAY
4t
Sheds No. 8, No. 9
Shed No. 12
Sheds No. 11, No. 10
No. 3 QUAY
4t
15t
4t
N
Slipways
Slipway
Shiploaders
No. 13
No. 14
Ore Berth
Boat Ramp
Trawler Quay
Fish Wharf
Seamans Institute
Ore Stacking Bins
0
500
SCALE
METRES

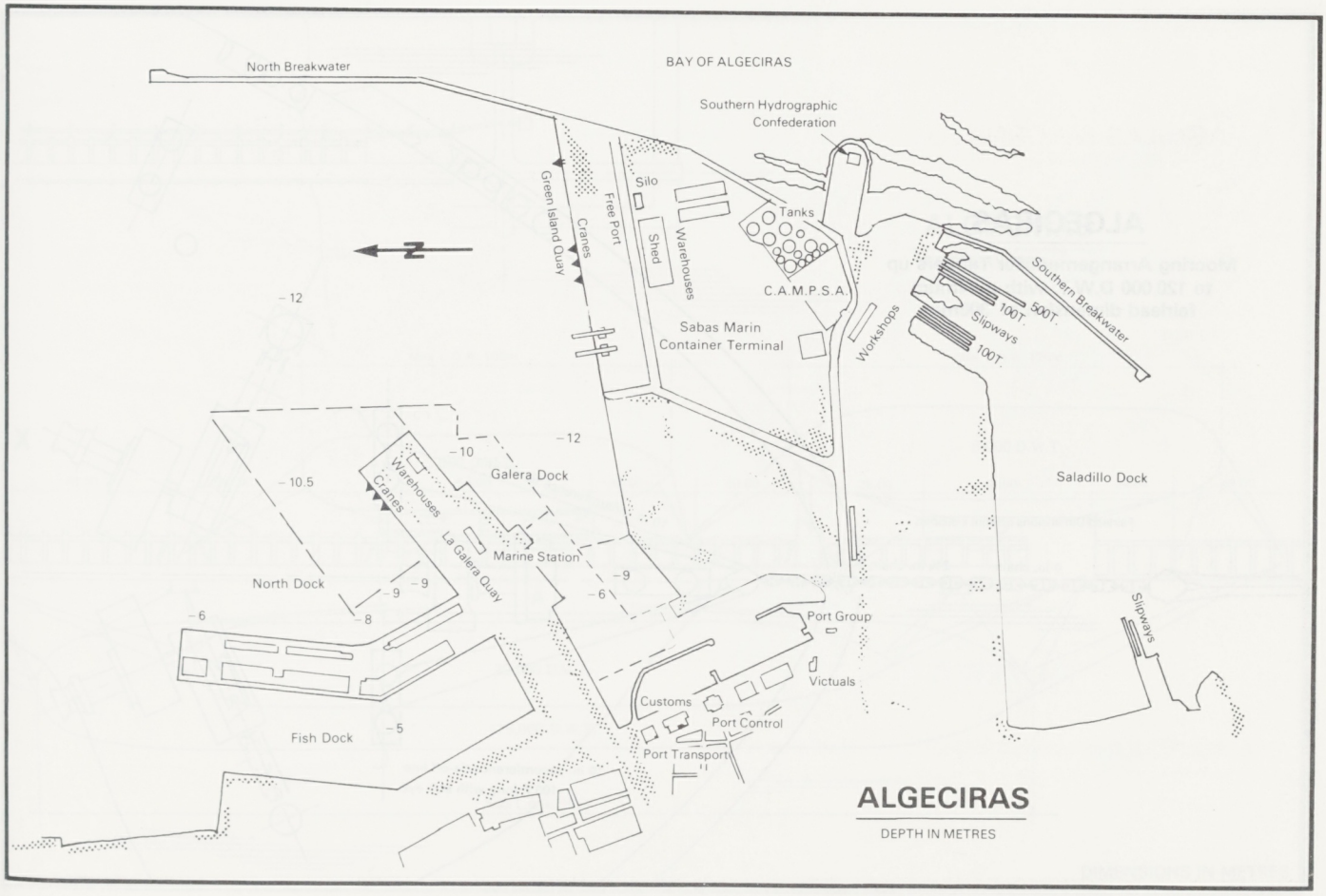

Racon
Leading Light
Aluminium Company
Leading Light
Racon
Bulk Cargo Quay (clean)
Being reclaimed
Harbour Craft Quay
Slipway
Mzingazi Canal
Being reclaimed
701 702 703
609
Dredged to 12.8 m
Pipe Dyke
Pelican I
Port Control
Dredged to 19 m
North Breakwater
Fl. (2) 5s 16 m. 6M
209
301
302
19.5 m
Tank Farm
Berm Wall
Bulk Coal Quay
22m
South Breakwater
Fl. (2) R. 5s
16 m. 6M
Leading Light bearing 111°–291°T
24m
Tidal Control Gates
Sand with dense bush in places
Umhlatuzi Lagoon
INDIAN OCEAN
New Estuary
N
RICHARDS BAY

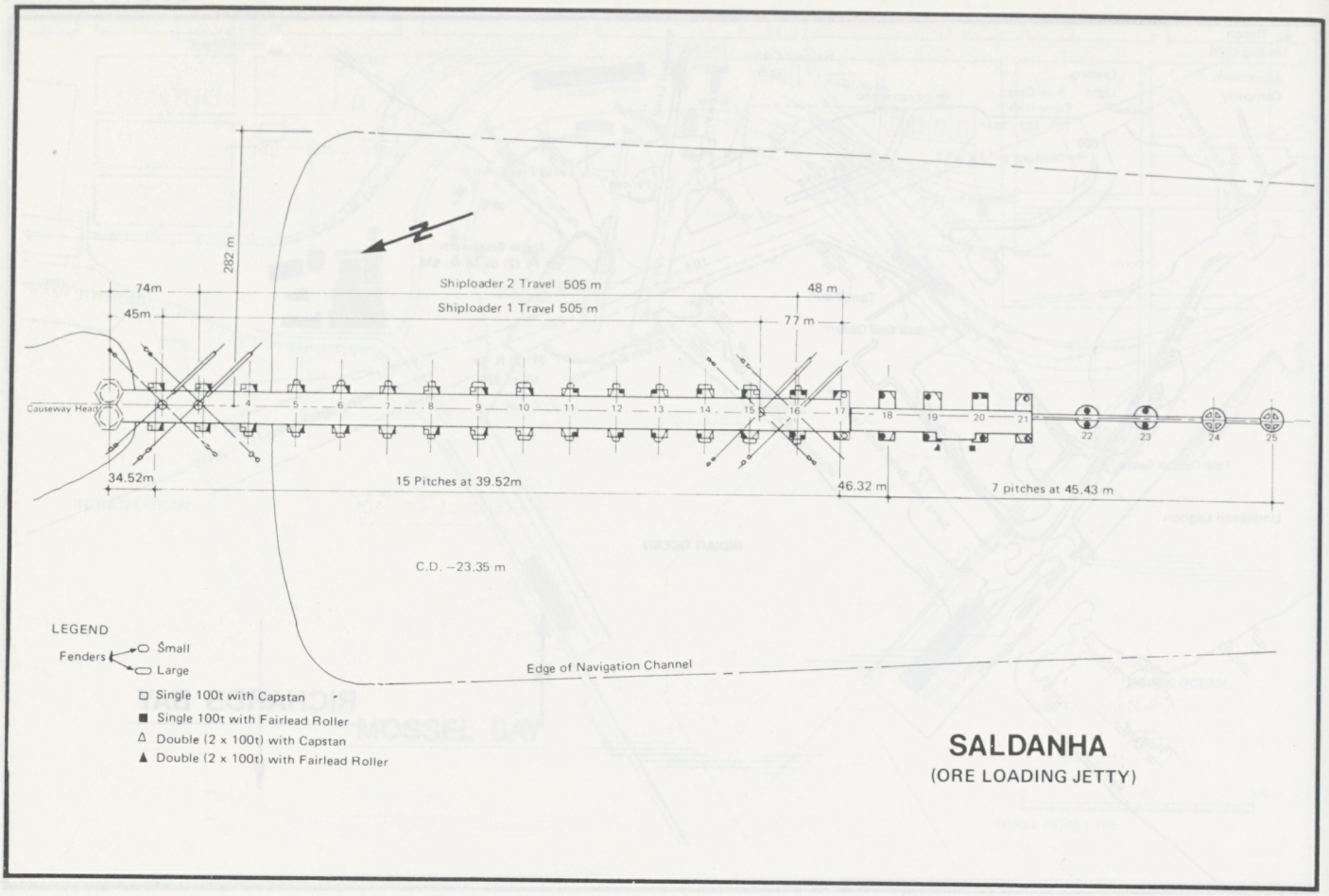

Multi-purpose Quay
Stockpile Area
APPROACH CHANNEL
SALDANHA
General Cargo Quay
2×15t cranes
Danger Bay
5m
10m
Causeway
Ore Loading Jetty
BREAKWATER
5m
10m
15m
Harbour Control
radar and harbour
captain's office
NAVIGATION CHANNEL
North Bay
Anchorage
Lighthouse
North Head
Malgaseland
SOUTH CHANNEL
43m
SALDANHA BAY
APPROACHES
36m
OUTER BAY
47m
Wasserfall Bank
(breaks in heavy weather)
17 m.
ATLANTIC OCEAN
HARBOUR BOUNDARY
N
Jutten Eiland
0 1 2 3 4 km
South Head


282 m
74m
45m
Shiploader 2 Travel 505 m
Shiploader 1 Travel 505 m
48 m
77 m
Causeway Head
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
34.52m
15 Pitches at 39.52m
46.32 m
7 pitches at 45.43 m
C.D. −23.35 m
LEGEND
Fenders
Small
Large
Single 100t with Capstan
Single 100t with Fairlead Roller
Double (2 x 100t) with Capstan
Double (2 x 100t) with Fairlead Roller
Edge of Navigation Channel
SALDANHA
(ORE LOADING JETTY)

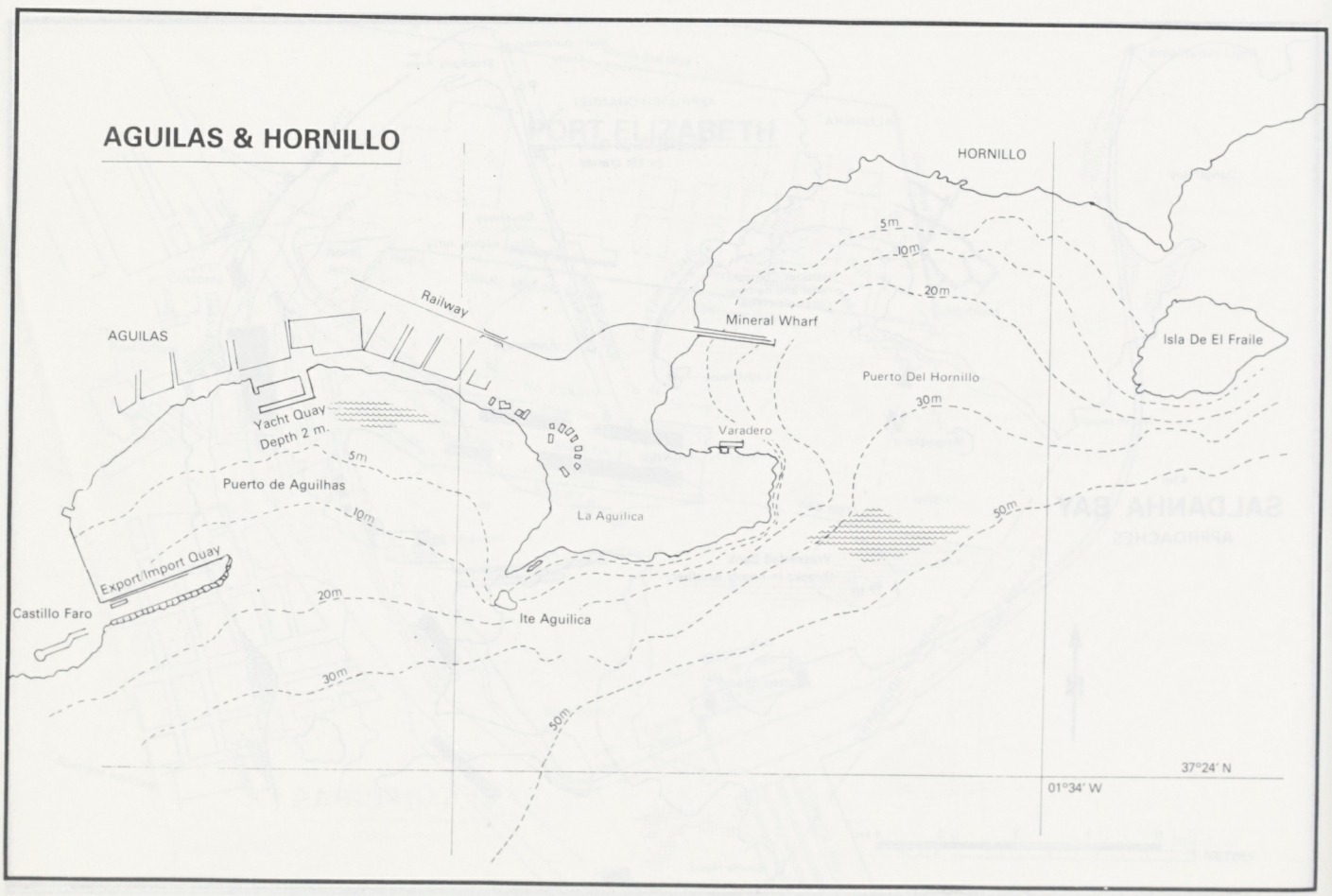

AGUILAS & HORNILLO
HORNILLO
5m
10m
20m
Railway
AGUILAS
Mineral Wharf
Isla De El Fraile
Puerto Del Hornillo
30m
Yacht Quay
Depth 2 m.
Varadero
5m
Puerto de Aguilhas
10m
La Aguilica
50m
Export/Import Quay
Castillo Faro
20m
Ite Aguilica
30m
50m
37°24' N
01°34' W

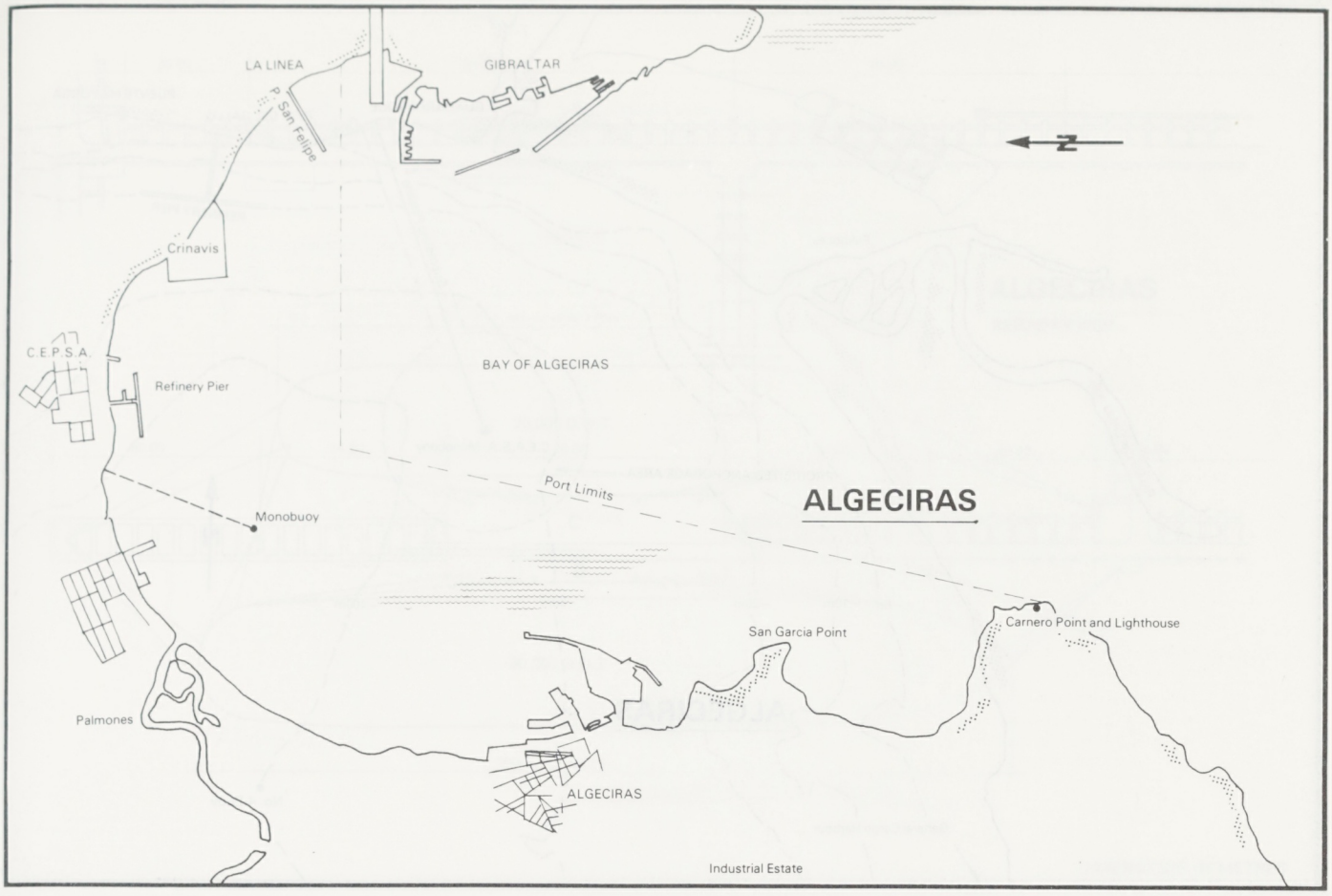

LA LINEA
GIBRALTAR
P. San Felipe
N
Crinavis
C.E.P.S.A.
Refinery Pier
BAY OF ALGECIRAS
Port Limits
ALGECIRAS
Monobuoy
San Garcia Point
Carnero Point and Lighthouse
Palmones
ALGECIRAS
Industrial Estate

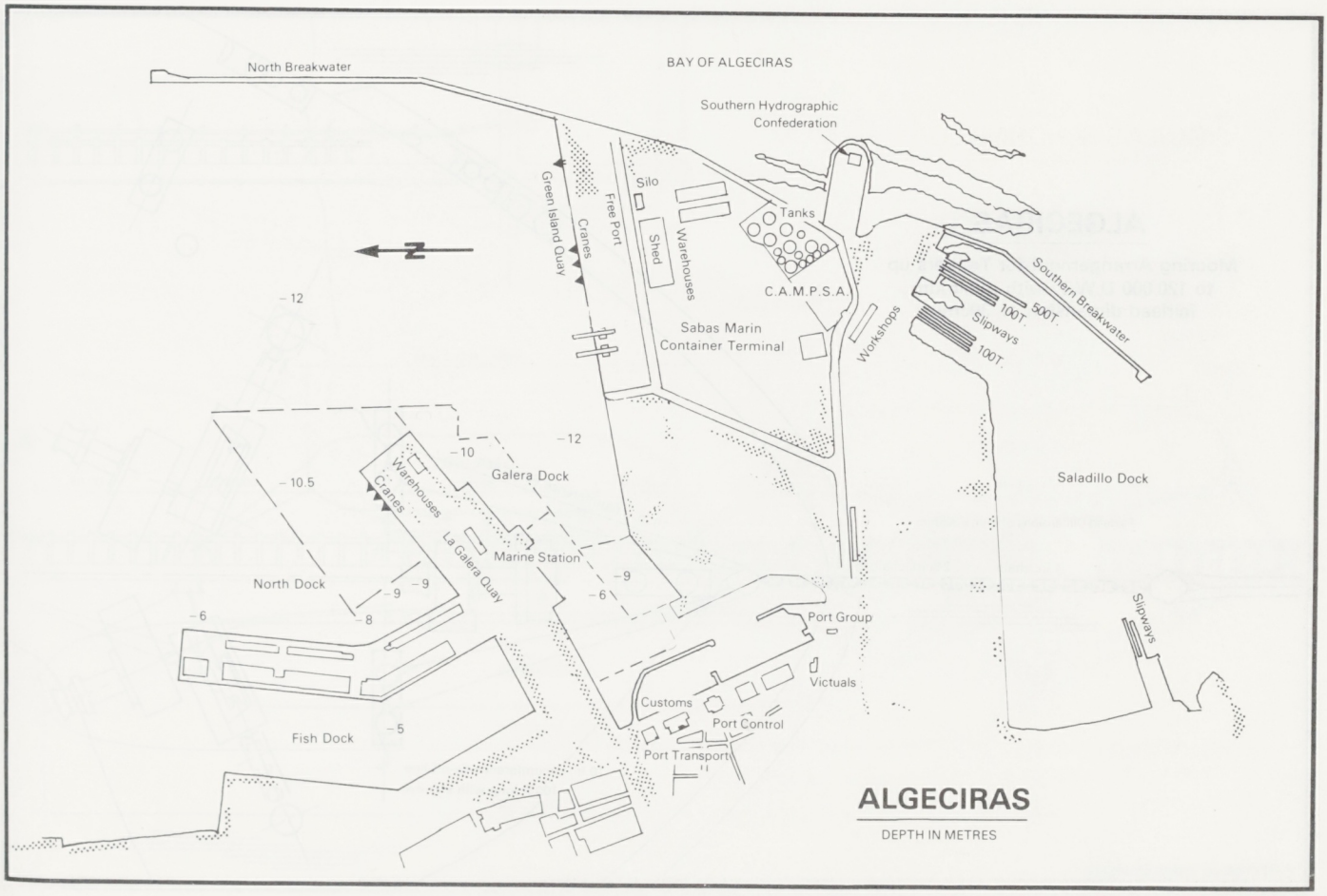

North Breakwater
BAY OF ALGECIRAS
Southern Hydrographic Confederation
Green Island Quay
Cranes
Free Port
Silo
Shed
Warehouses
Tanks
C.A.M.P.S.A.
Sabas Marin Container Terminal
Workshops
Southern Breakwater
100T.
500T.
Slipways
100T.
N
-12
-10
-12
-10.5
Galera Dock
Warehouses
Cranes
La Galera Quay
Marine Station
North Dock
-9
-9
-9
-6
-8
-6
Saladillo Dock
Port Group
Victuals
Customs
Port Control
Port Transport
Fish Dock
-5
Slipways
ALGECIRAS
DEPTH IN METRES

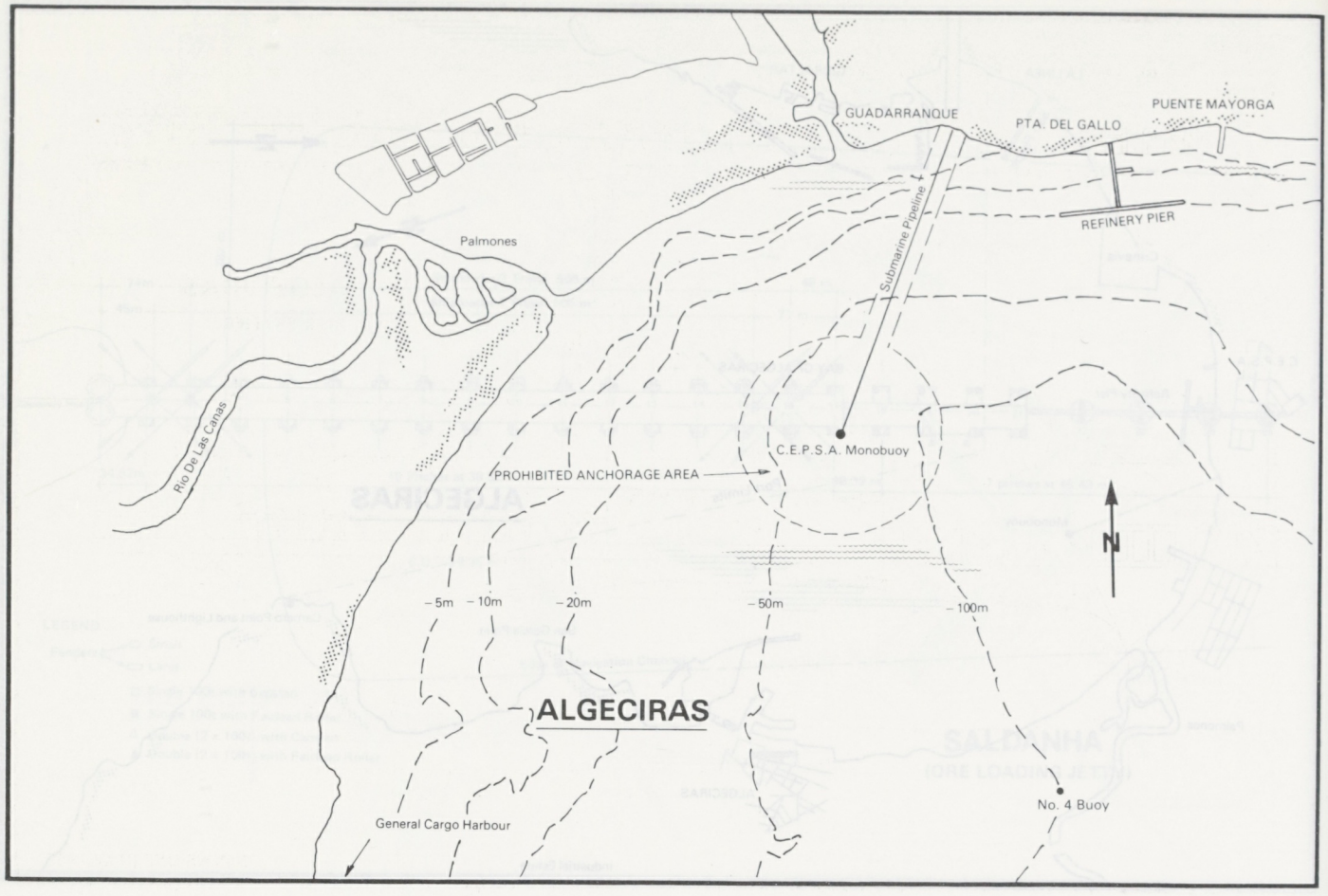


SALDANHA
(ORE LOADING JETTY)



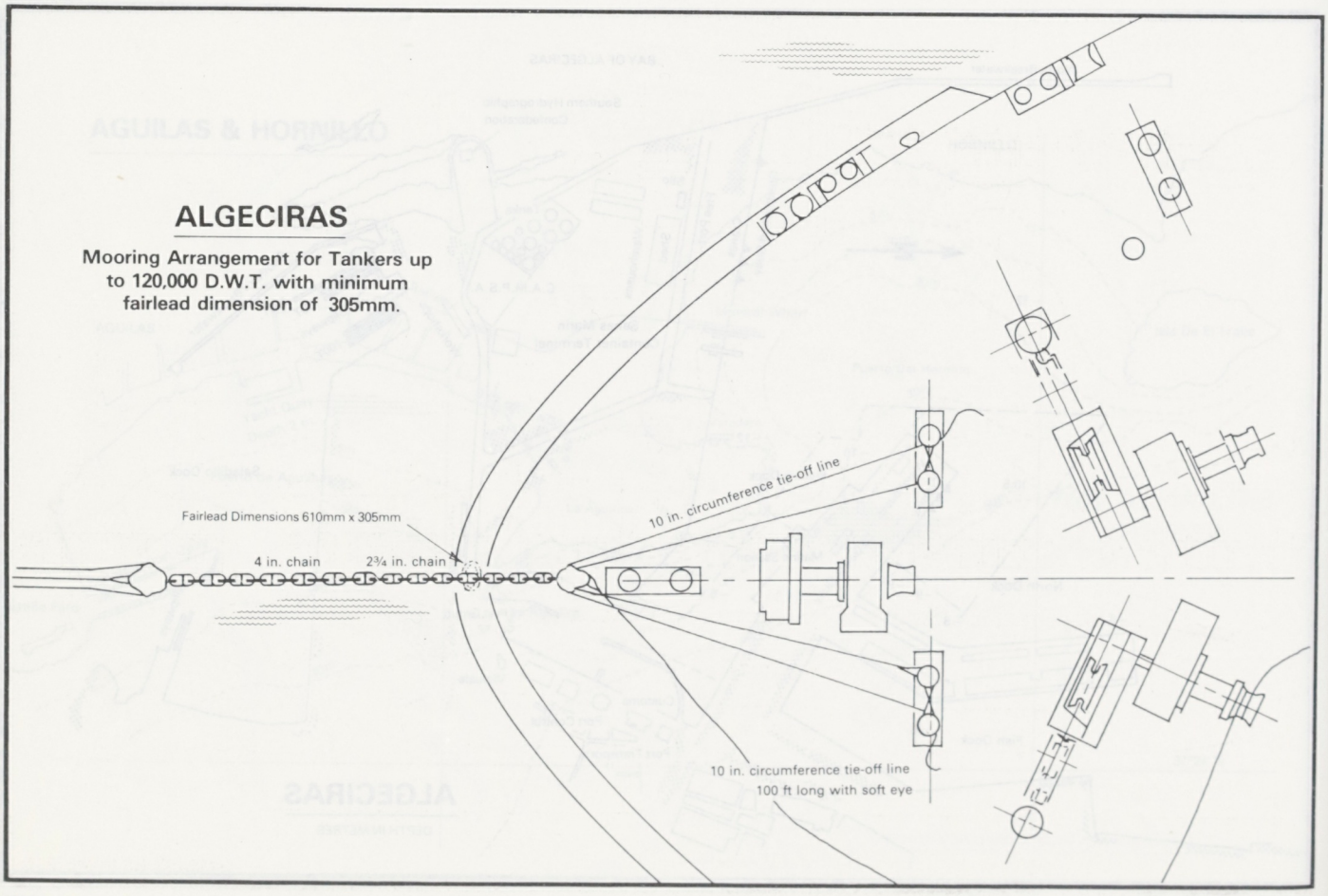

LA LINEA
GIBRALTAR
P. San Felipe
N
Crinavis
C.E.P.S.A.
Refinery Pier
BAY OF ALGECIRAS
Port Limits
ALGECIRAS
Monobuoy
San Garcia Point
Carnero Point and Lighthouse
Palmones
ALGECIRAS
Industrial Estate

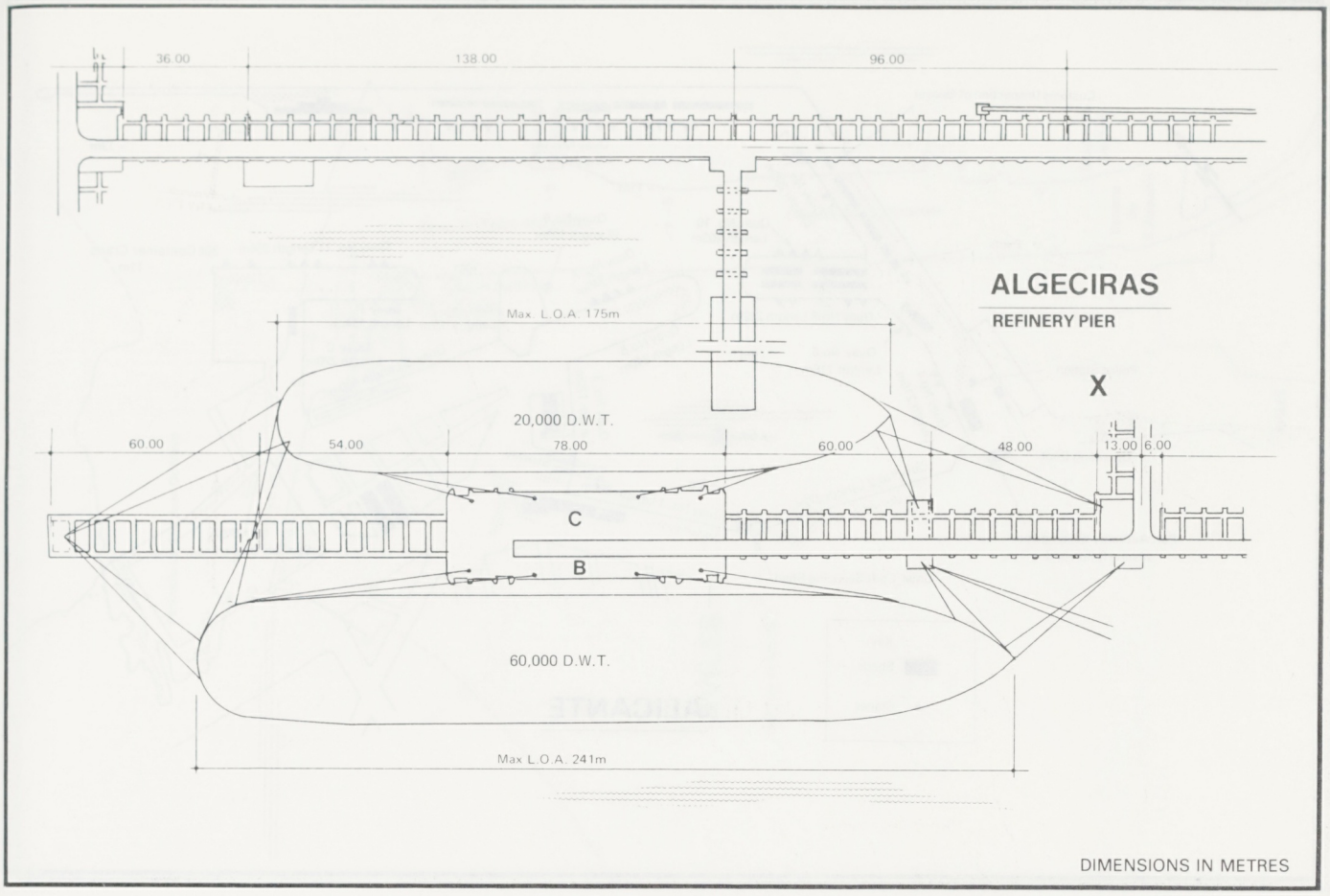

North Breakwater
BAY OF ALGECIRAS
Southern Hydrographic Confederation
Green Island Quay
Cranes
Free Port
Silo
Shed
Warehouses
Tanks
C.A.M.P.S.A.
Sabas Marin Container Terminal
Workshops
Southern Breakwater
100T.
500T.
Slipways
100T.
N
-12
-10
-12
-10.5
Galera Dock
Warehouses
Cranes
La Galera Quay
Marine Station
Saladillo Dock
North Dock
-9
-9
-6
-8
-9
-6
Port Group
Victuals
Customs
Port Control
Port Transport
Slipways
Fish Dock
-5
ALGECIRAS
DEPTH IN METRES

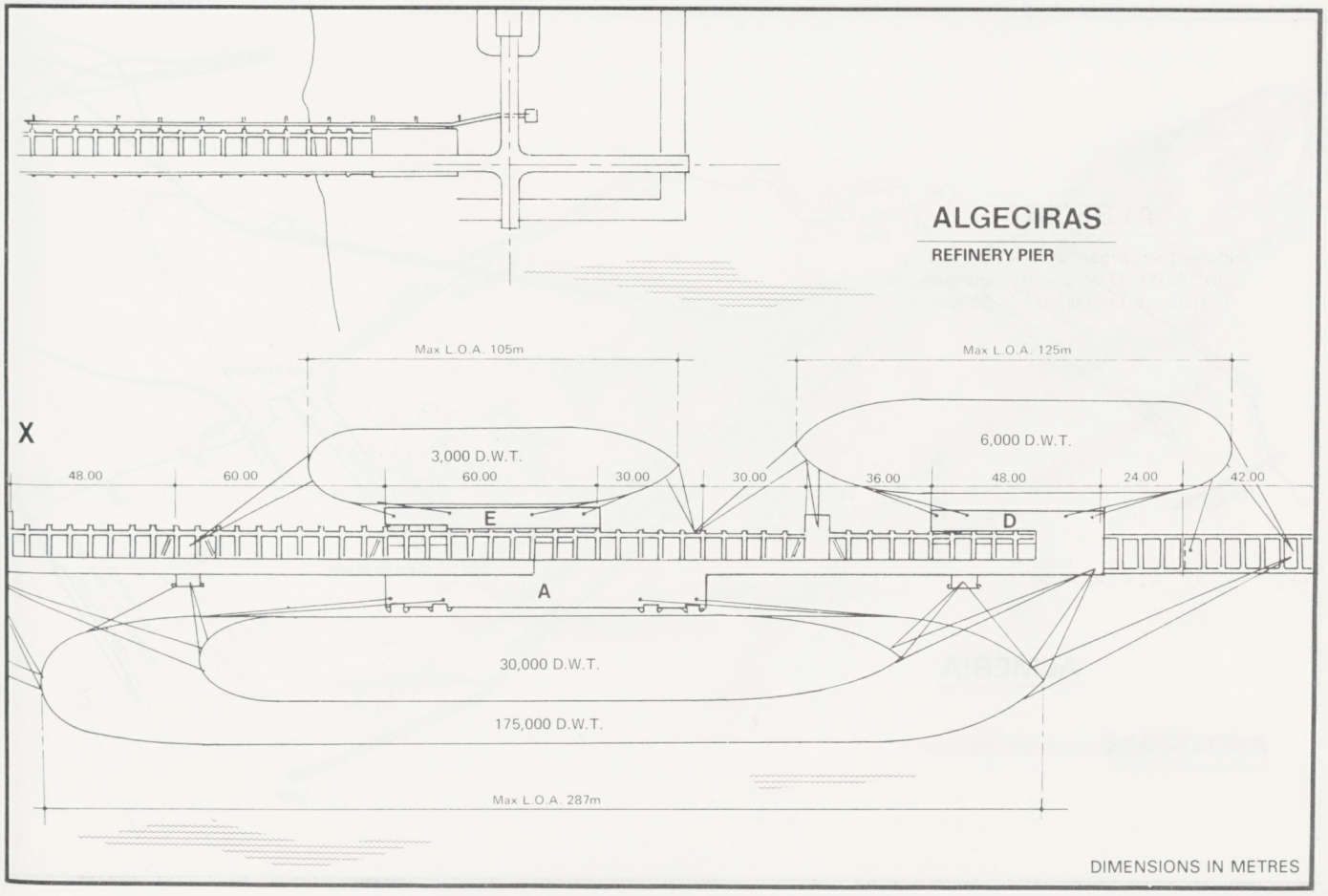


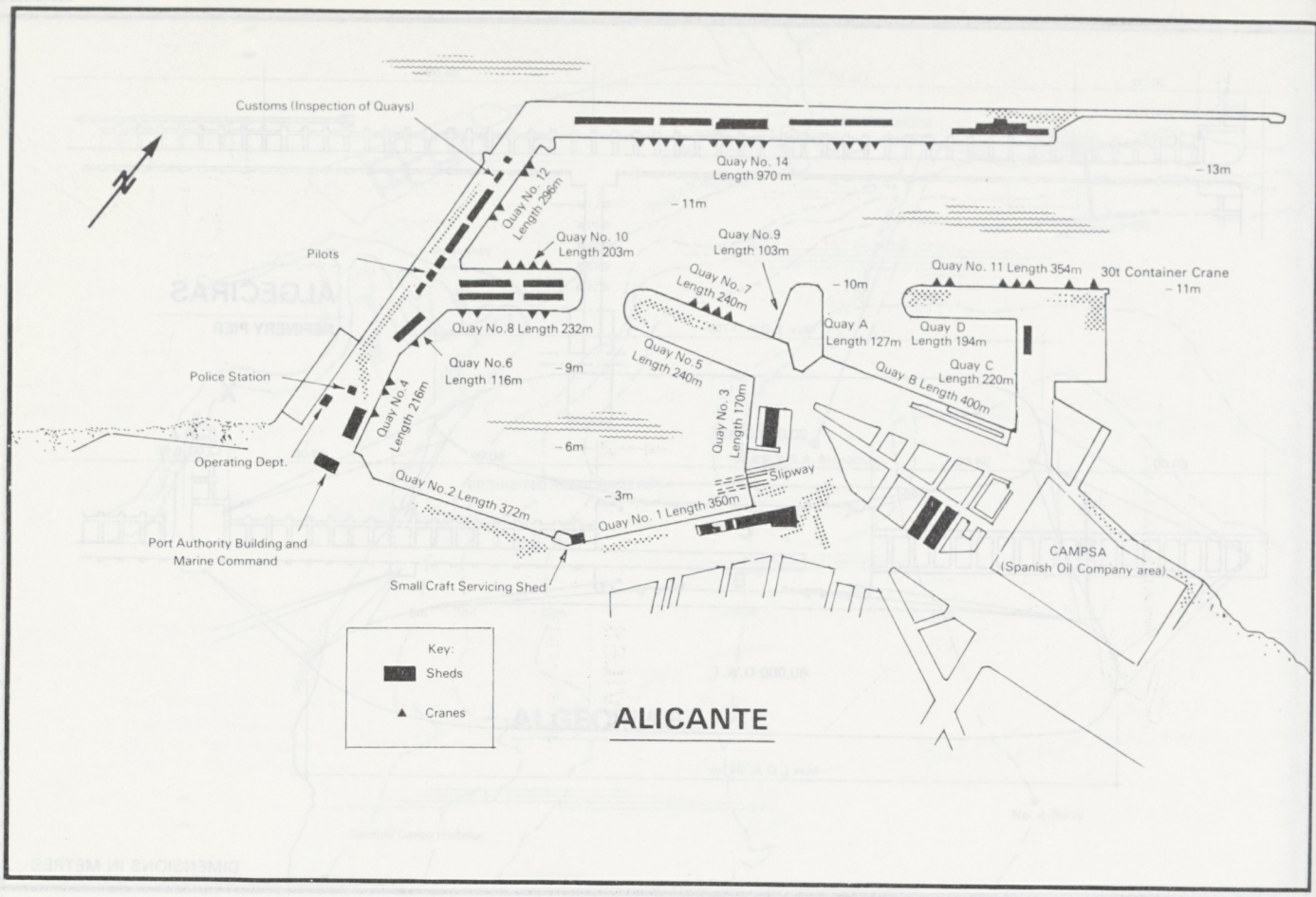
ALGECIRAS

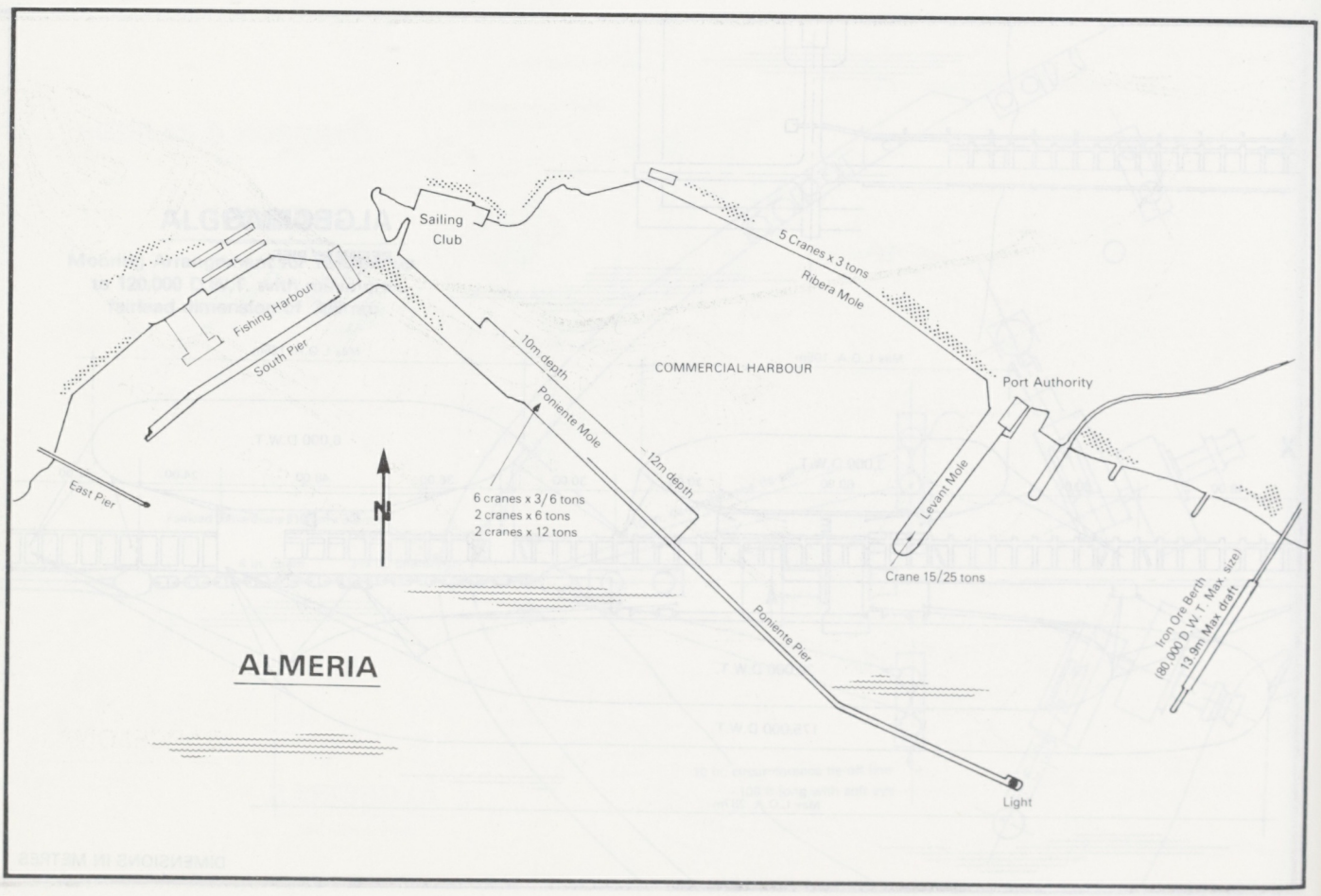
Mooring Arrangement for Tankers up to 120,000 D.W.T. with minimum fairlead dimension of 305mm.

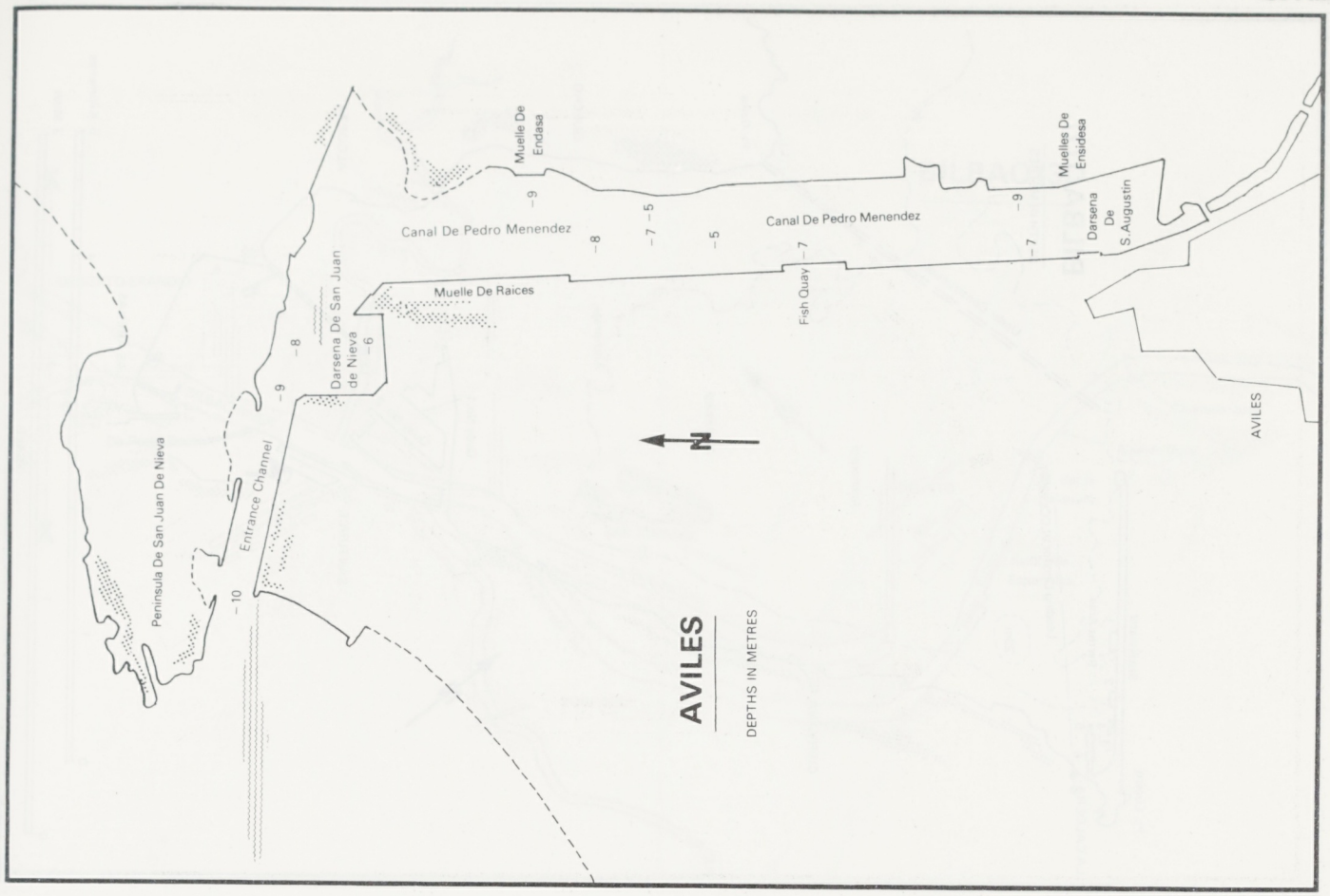


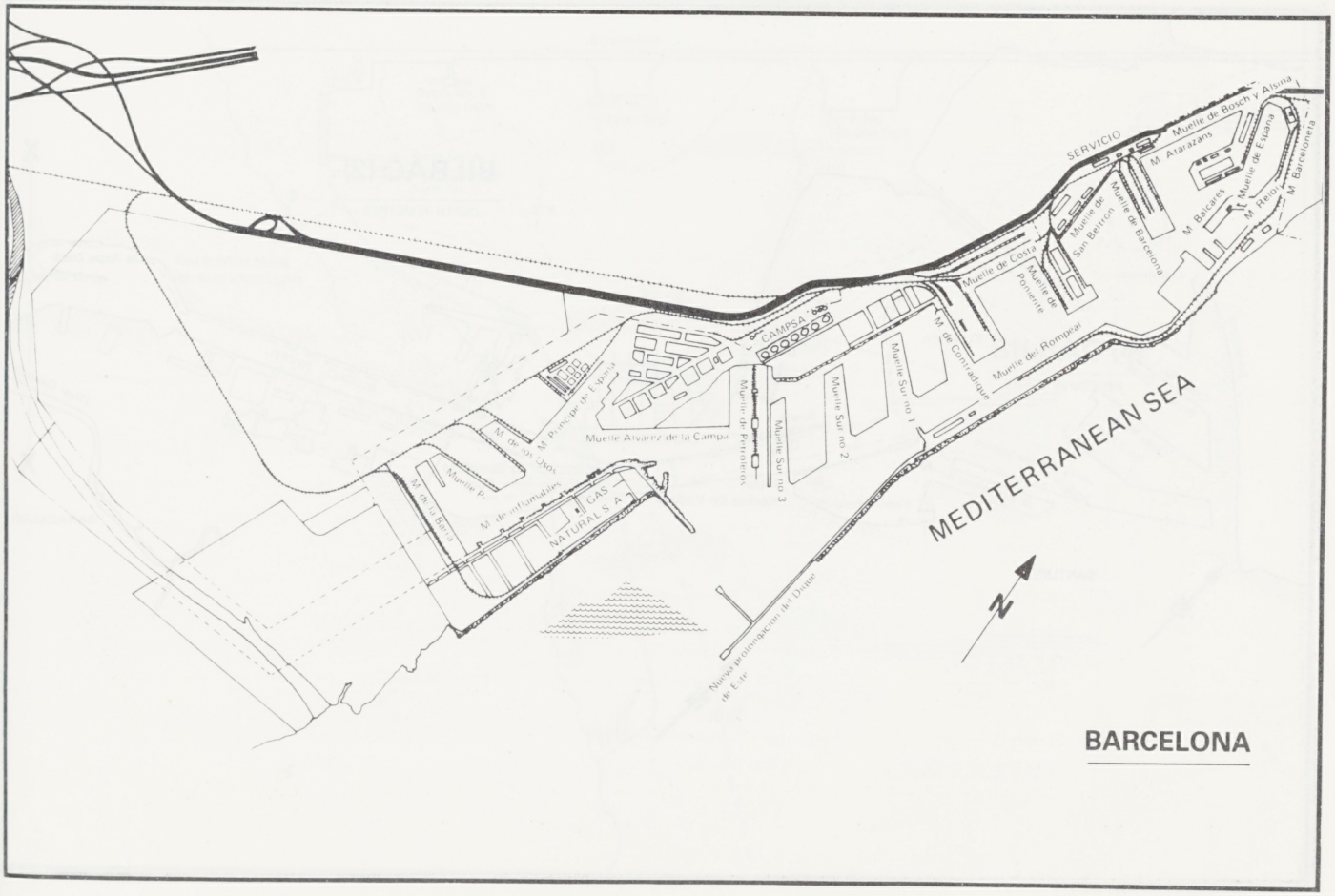

36.00
138.00
96.00
ALGECIRAS
REFINERY PIER
Max. L.O.A. 175m
X
20,000 D.W.T.
60.00
54.00
78.00
60.00
48.00
13.00
6.00
C
B
60,000 D.W.T.
Max L.O.A. 241m
DIMENSIONS IN METRES

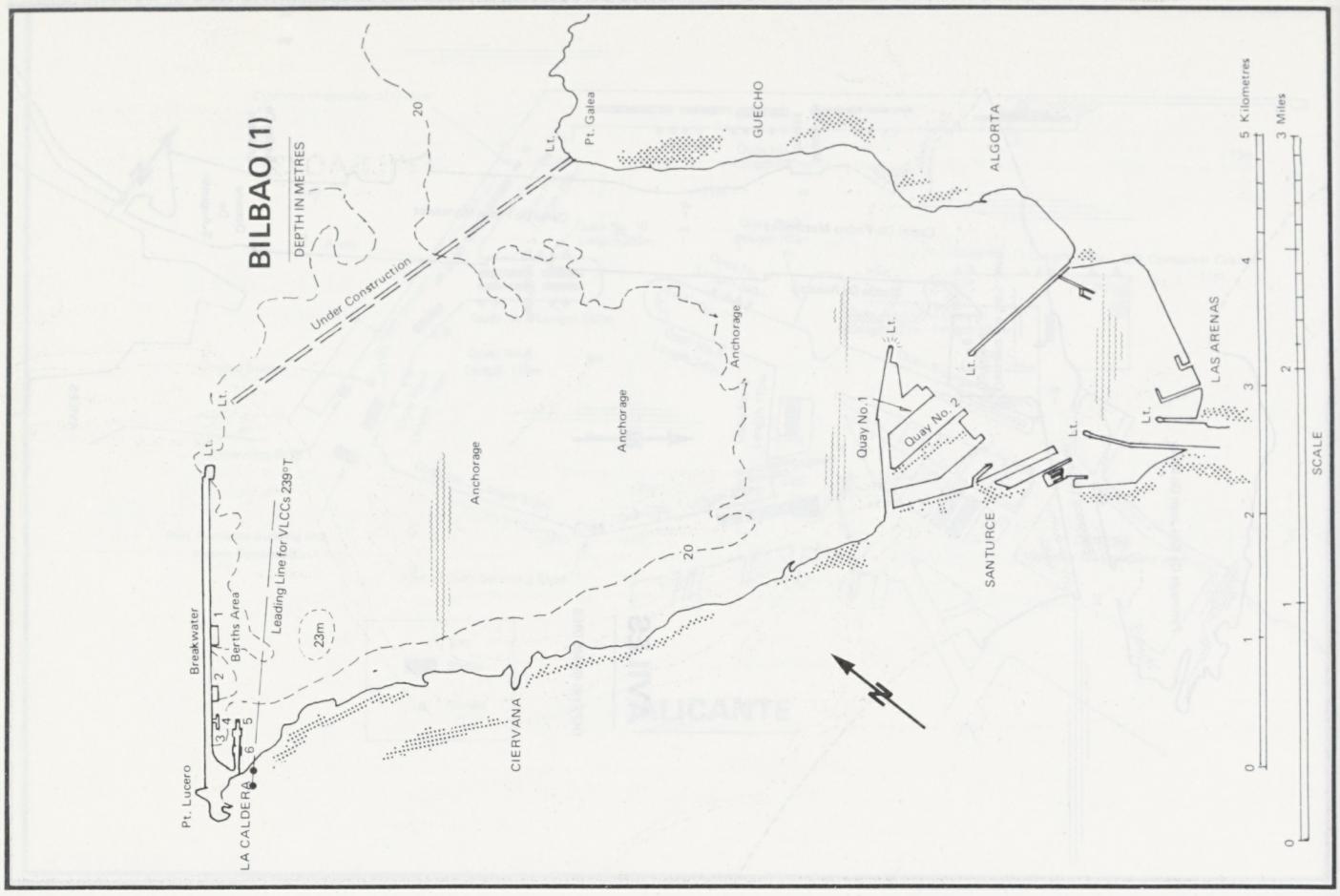

ALGECIRAS
REFINERY PIER
Max L.O.A. 105m
Max L.O.A. 125m
X
3,000 D.W.T.
6,000 D.W.T.
48.00
60.00
60.00
30.00
30.00
36.00
48.00
24.00
42.00
E
D
A
30,000 D.W.T.
175,000 D.W.T.
Max L.O.A. 287m
DIMENSIONS IN METRES

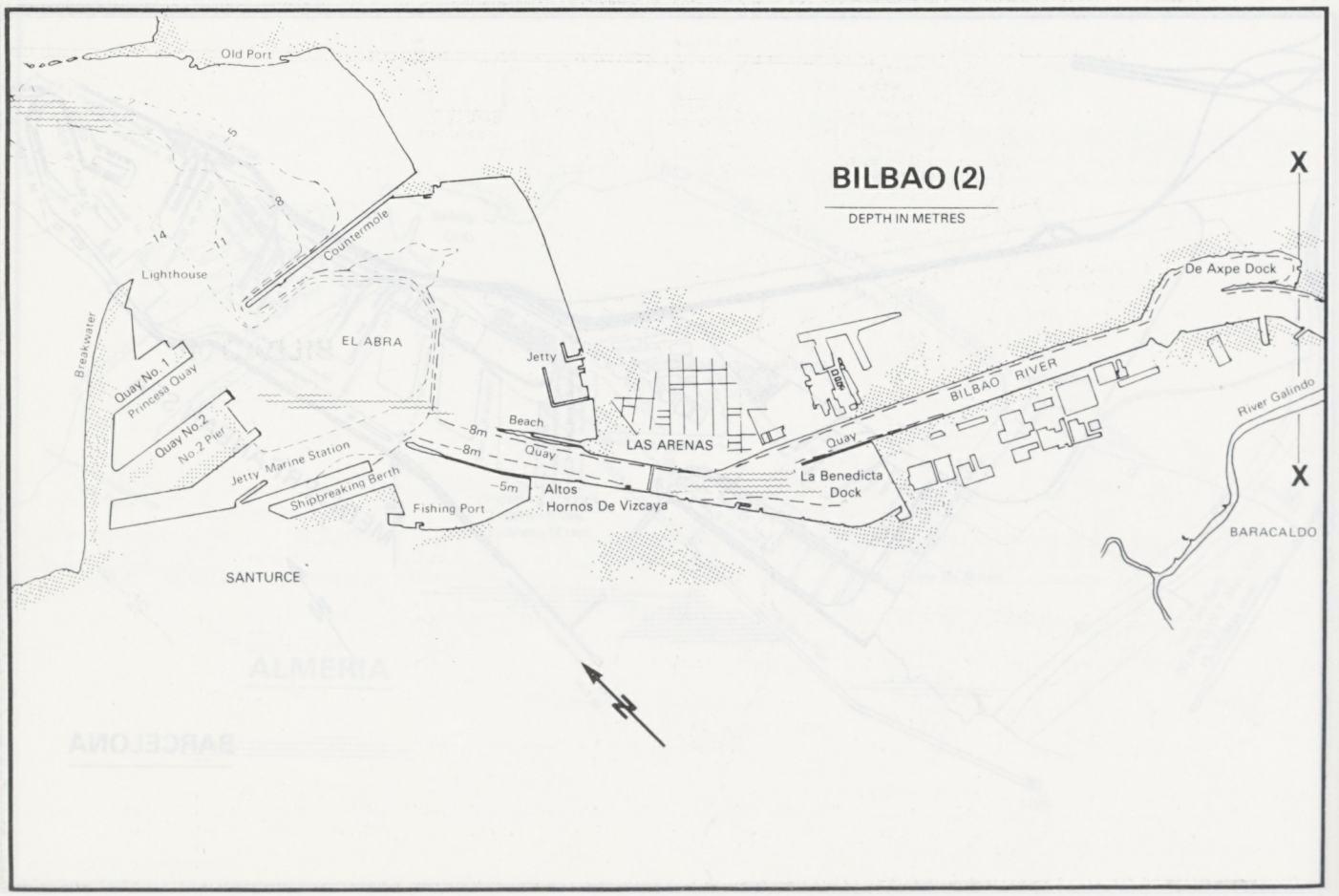

Customs (Inspection of Quays)
Quay No. 14
Length 970 m
– 13m
– 11m
Quay No. 12
Length 296m
Quay No. 10
Length 203m
Pilots
Quay No.9
Length 103m
Quay No. 7
Length 240m
– 10m
Quay No. 11 Length 354m
30t Container Crane
– 11m
Quay A
Length 127m
Quay D
Length 194m
Quay No.8 Length 232m
Quay No.6
Length 116m
– 9m
Quay No.5
Length 240m
Quay C
Length 220m
Police Station
Quay No.4
Length 216m
Quay No. 3
Length 170m
Quay B Length 400m
– 6m
Operating Dept.
Slipway
– 3m
Quay No.2 Length 372m
Quay No. 1 Length 350m
Port Authority Building and
Marine Command
Small Craft Servicing Shed
CAMPSA
(Spanish Oil Company area)
Key:
Sheds
Cranes
ALICANTE

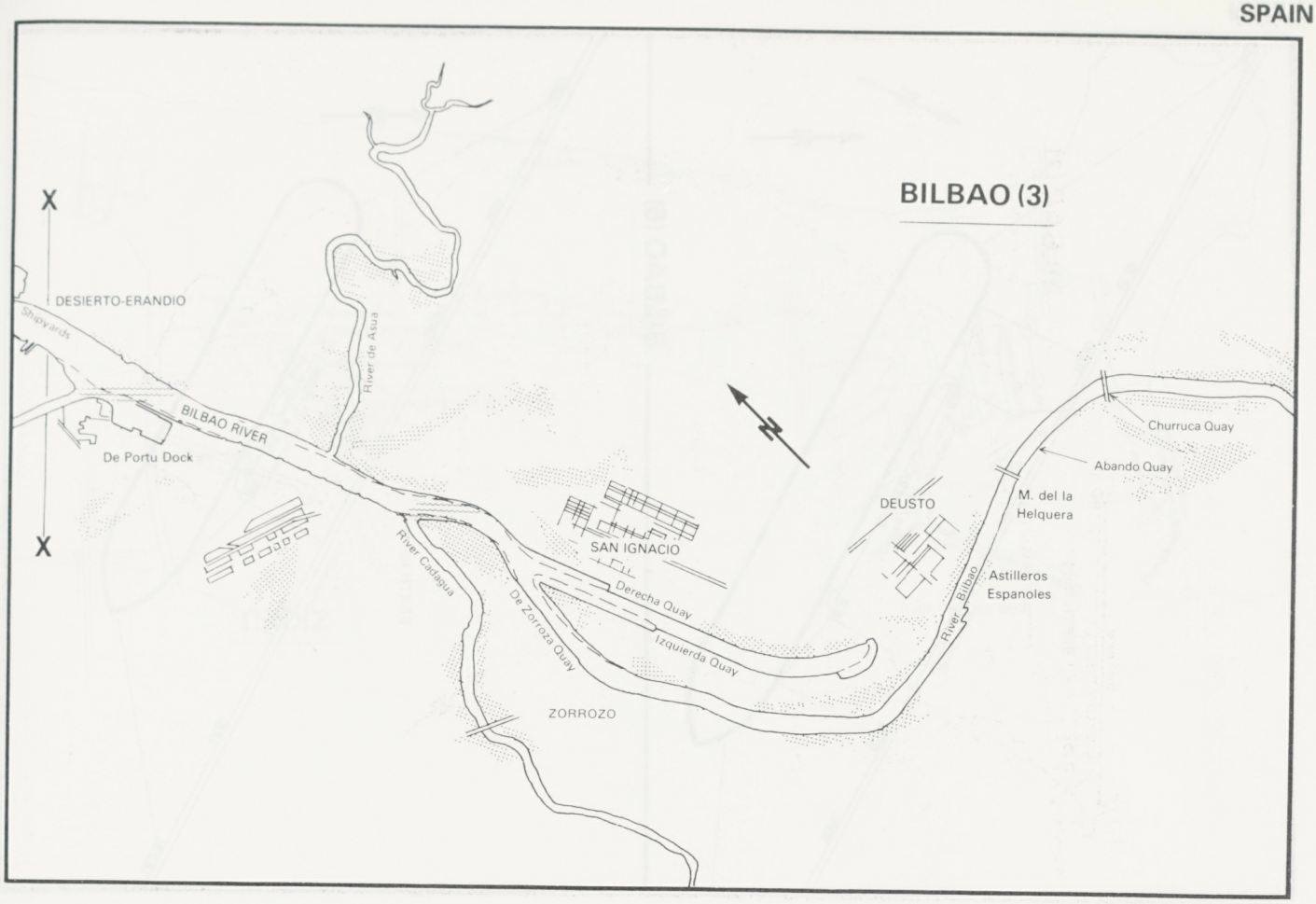

Sailing
Club
5 Cranes x 3 tons
Ribera Mole
Fishing Harbour
South Pier
– 10m depth
COMMERCIAL HARBOUR
Port Authority
Poniente Mole
– 12m depth
East Pier
6 cranes x 3/6 tons
2 cranes x 6 tons
2 cranes x 12 tons
Levant Mole
Crane 15/25 tons
Iron Ore Berth
(80,000 D.W.T. Max. size)
13.9m Max draft
Poniente Pier
ALMERIA
Light

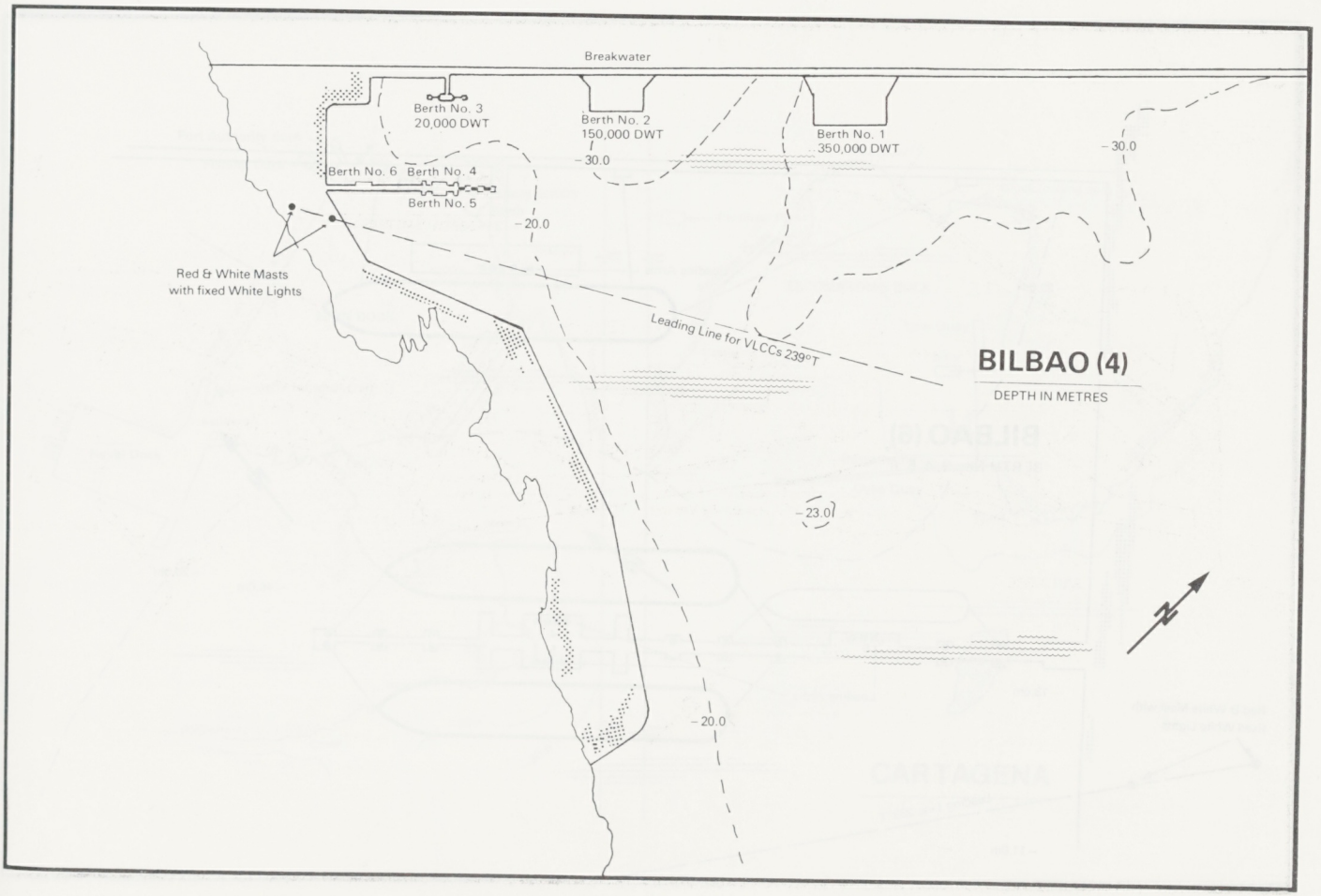

Muelle De Endasa
Muelles De Ensidesa
Canal De Pedro Menendez
Canal De Pedro Menendez
Darsena De S.Augustin
Muelle De Raices
Fish Quay
Darsena De San Juan de Nieva
Entrance Channel
Peninsula De San Juan De Nieva
AVILES
AVILES
DEPTHS IN METRES

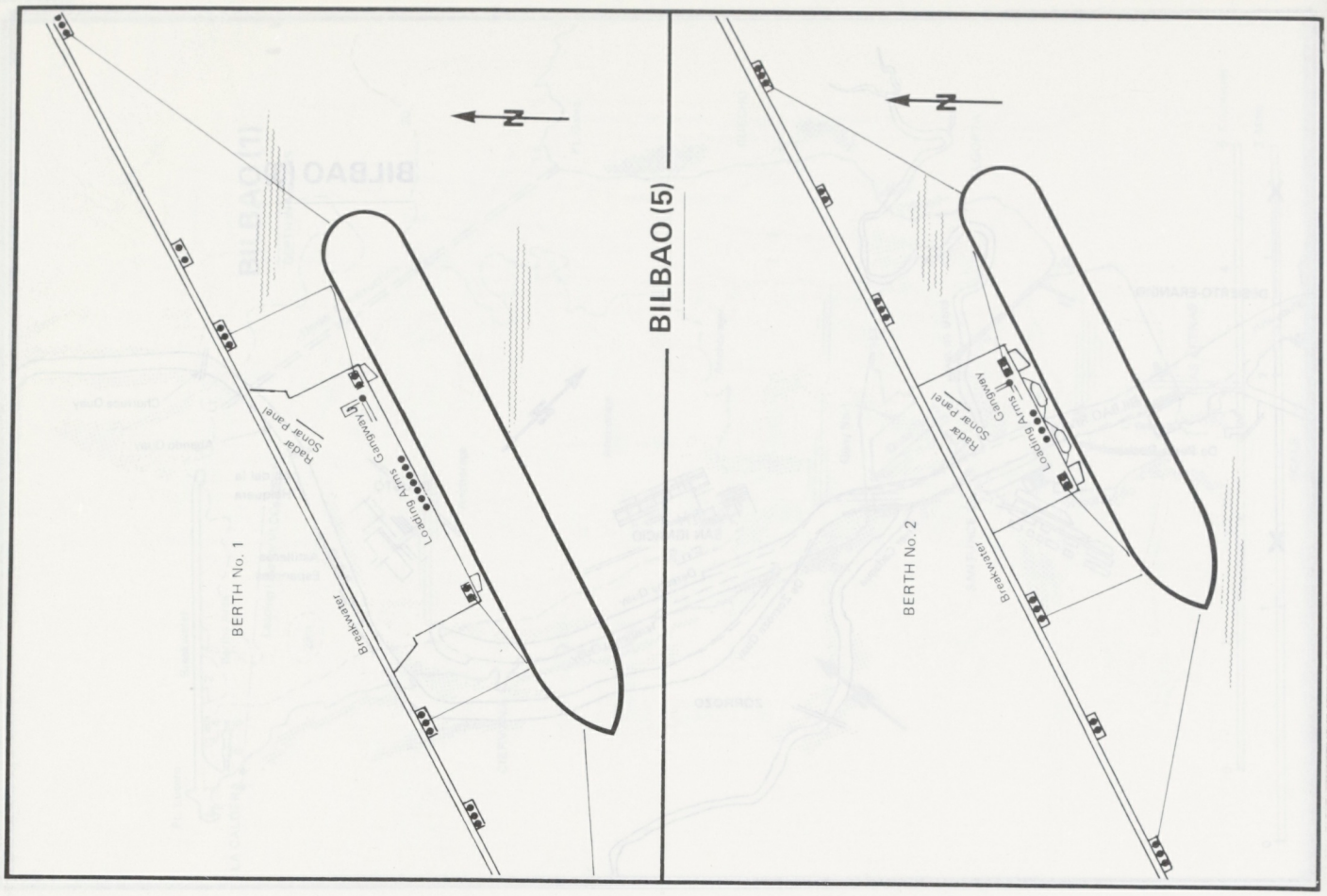

SERVICIO
Muelle de Bosch y Alsina
M. Ataraxans
M. Baleares
Muelle de España
M. Reina
M. Barceloneta
Muelle de San Bertron
Muelle de Barcelona
Muelle de Costa
Muelle de Poniente
CAMPSA
M. de Contradique
Muelle del Rompeal
Muelle Sur no 1
Muelle Sur no 2
Muelle Sur no 3
Muelle Alvarez de la Campa
M. Principe de España
M. de las Dos
M. de Ultramar
GAS NATURAL S.A.
MEDITERRANEAN SEA
BARCELONA

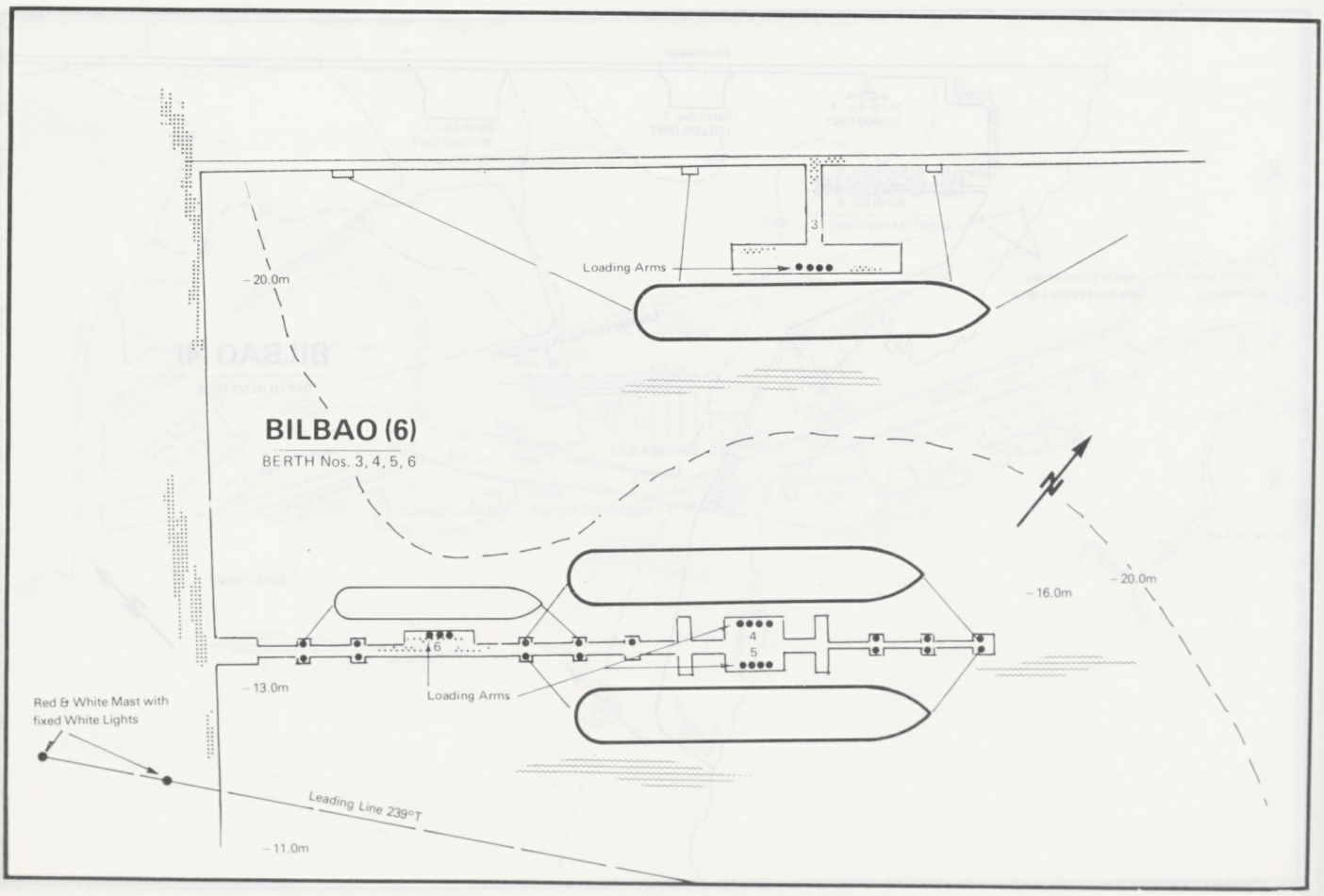

BILBAO (1)
DEPTH IN METRES
Under Construction
Pt. Galea
GUECHO
ALGORTA
LAS ARENAS
Lt.
Anchorage
Quay No.1
Quay No.2
SANTURCE
Breakwater
Berths Area
Leading Line for VLCCs 239°T
23m
Pt. Lucero
LA CALDERA
CIERVANA
5 Kilometres
3 Miles
SCALE

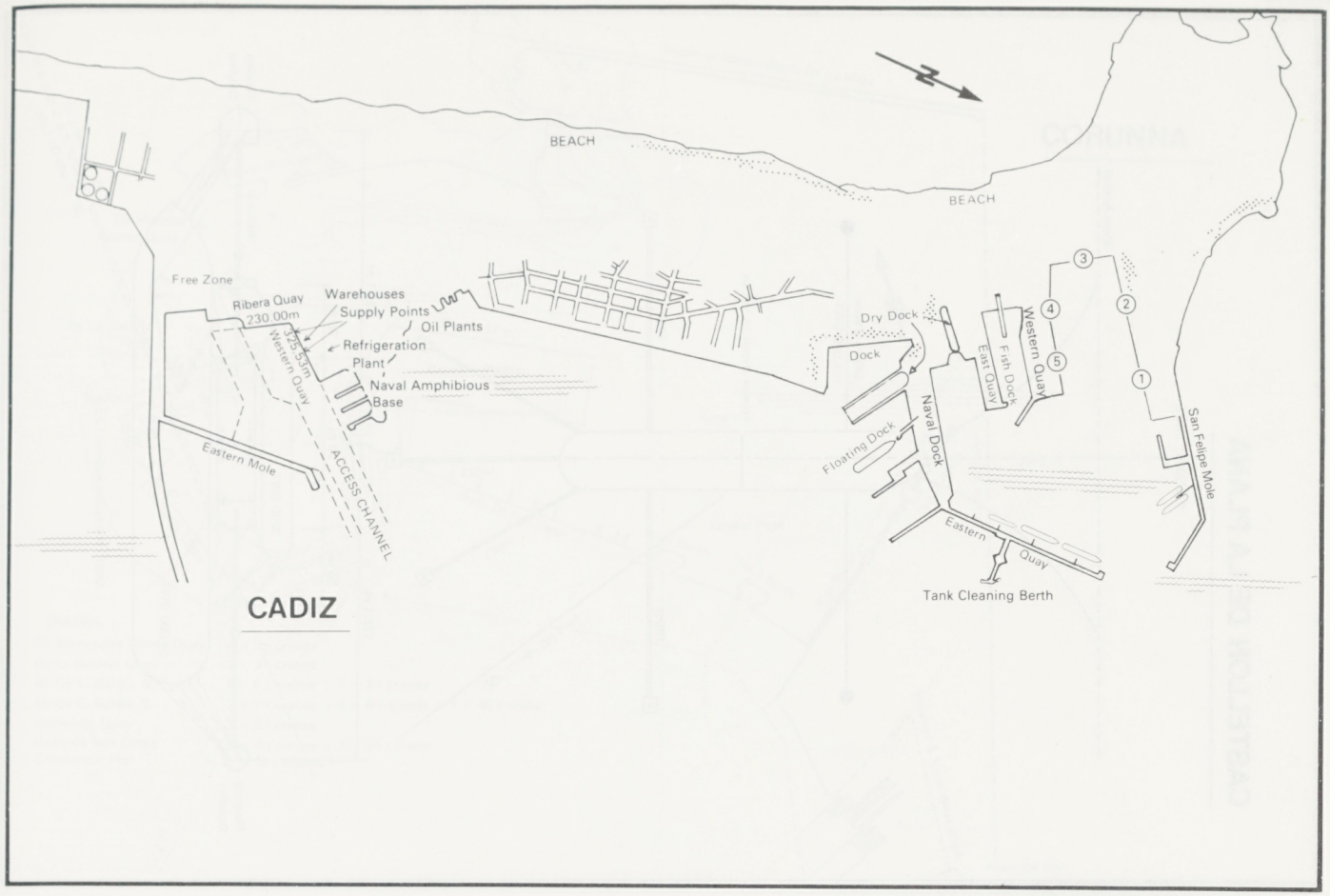

BILBAO (2)
DEPTH IN METRES
Old Port
Countermole
Lighthouse
Breakwater
EL ABRA
Quay No.1
Princesa Quay
Quay No.2
No.2 Pier
Jetty
Marine Station
Shipbreaking Berth
Fishing Port
SANTURCE
Jetty
Beach
Quay
LAS ARENAS
Altos Hornos De Vizcaya
BILBAO RIVER
De Axpe Dock
La Benedicta Dock
River Galindo
BARACALDO

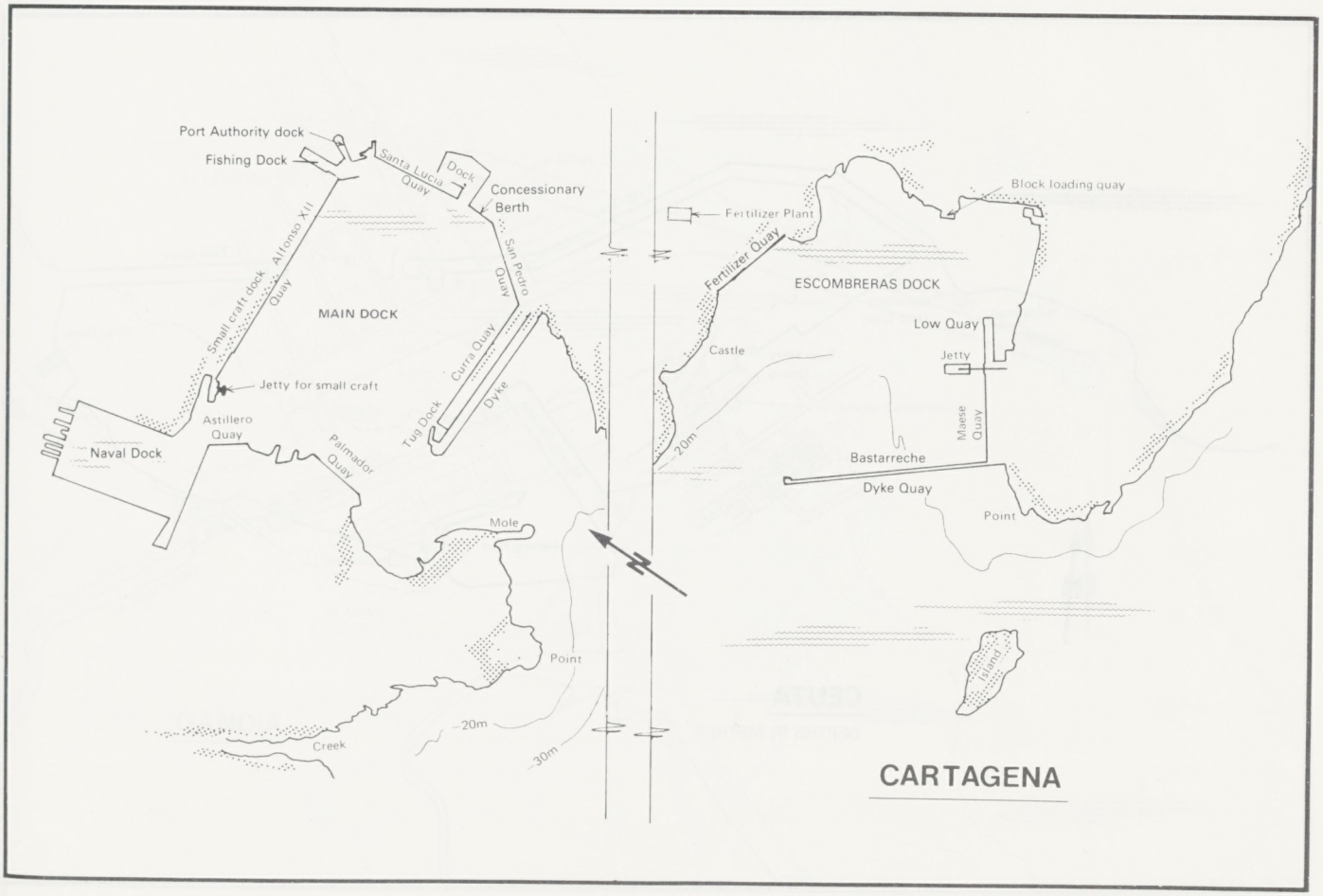

BILBAO (3)
X
X
DESIERTO-ERANDIO
Shipyards
River de Asua
BILBAO RIVER
De Portu Dock
River Cadagua
SAN IGNACIO
De Zorroza Quay
Derecha Quay
Izquierda Quay
ZORROZO
DEUSTO
River Bilbao
M. del la Helquera
Astilleros Espanoles
Churruca Quay
Abando Quay


Breakwater
Berth No. 3
20,000 DWT
Berth No. 2
150,000 DWT
Berth No. 1
350,000 DWT
Berth No. 6
Berth No. 4
Berth No. 5
-30.0
-30.0
-20.0
Red & White Masts
with fixed White Lights
Leading Line for VLCCs 239°T
BILBAO (4)
DEPTH IN METRES
-23.0
-20.0

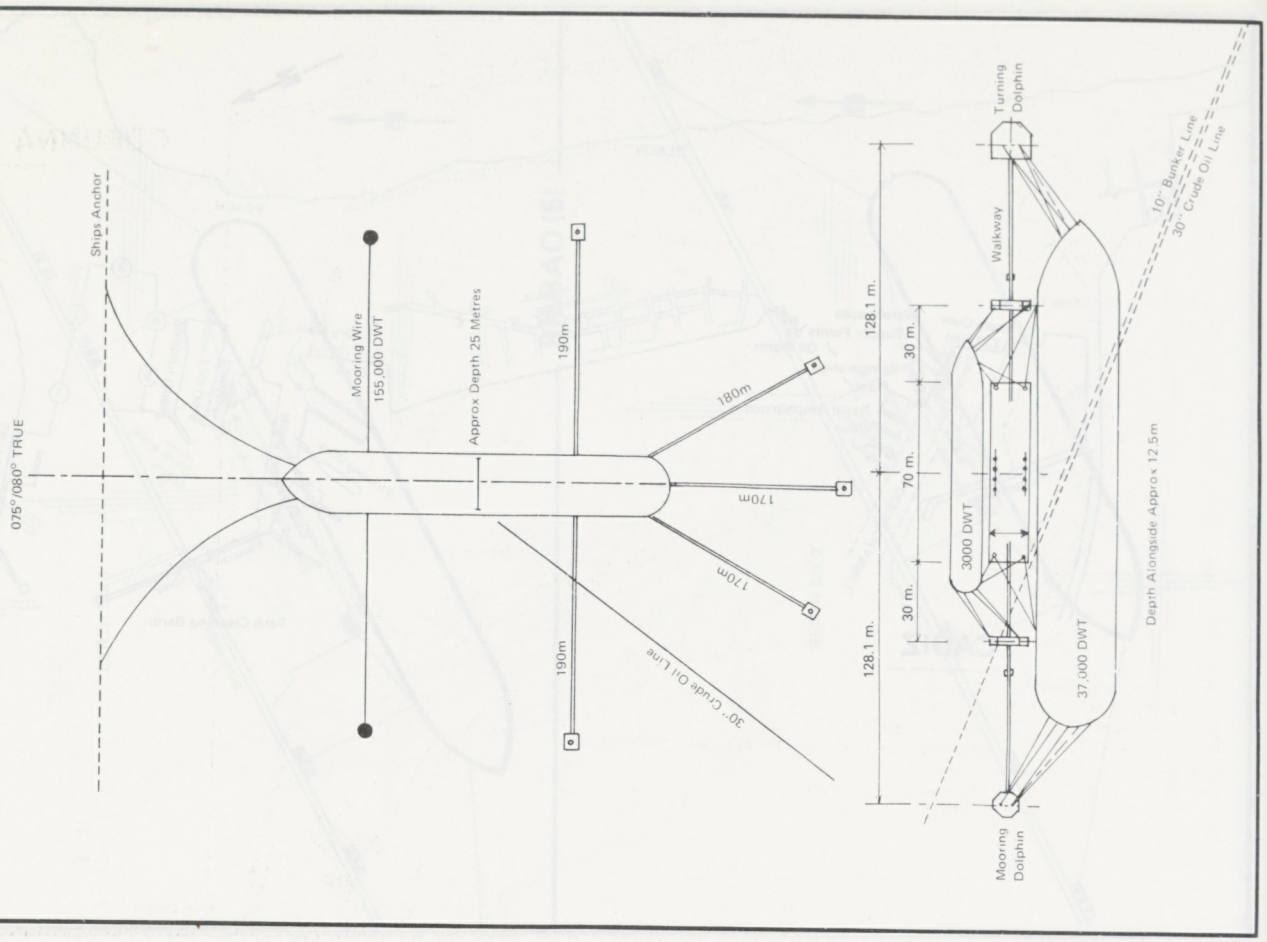

BILBAO (5)
N
BERTH No. 1
Breakwater
Loading Arms
Gangway
Radar
Sonar Panel
N
BERTH No. 2
Breakwater
Loading Arms
Gangway
Radar
Sonar Panel

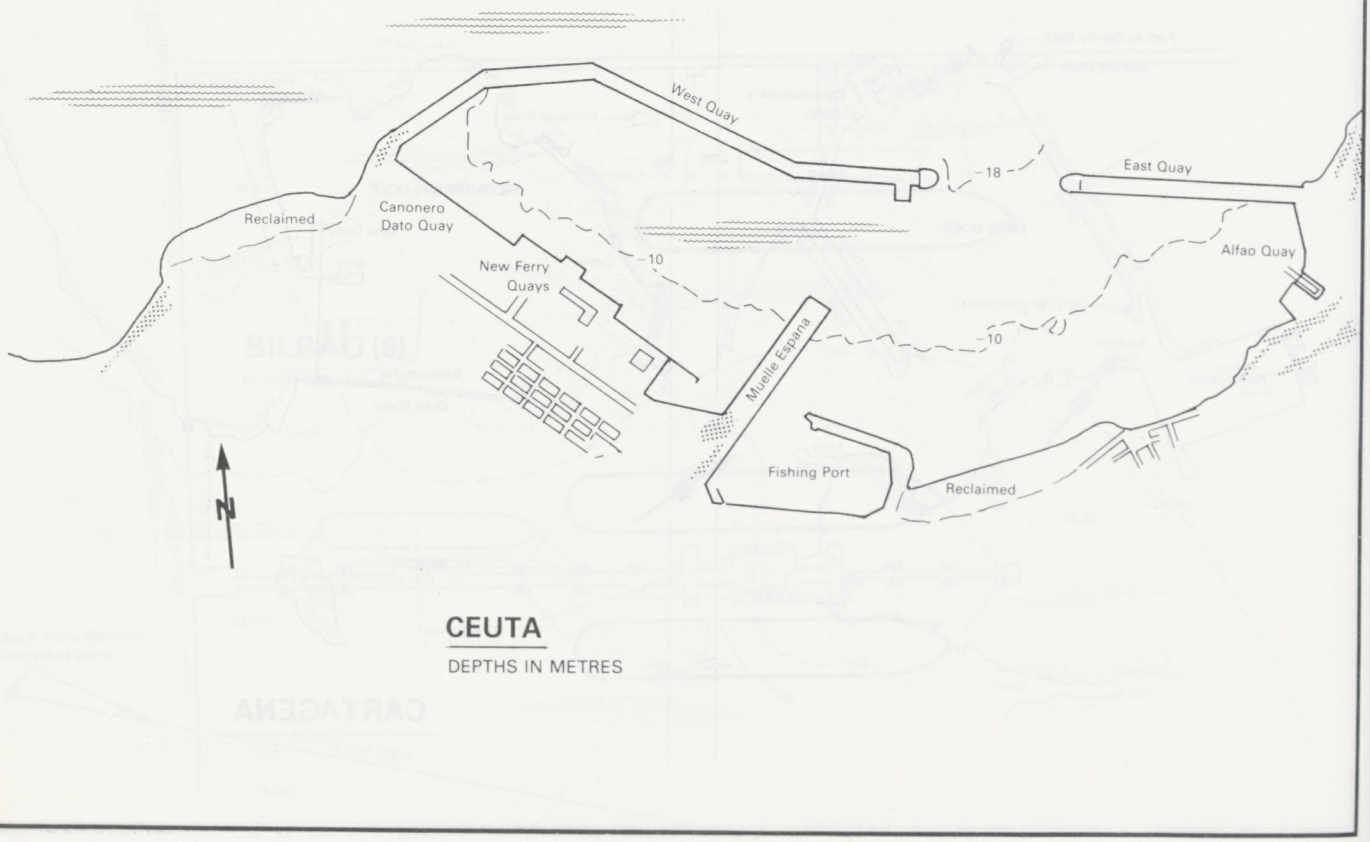

BILBAO (6)
BERTH Nos. 3, 4, 5, 6
Loading Arms
3
4
5
6
20.0m
16.0m
20.0m
13.0m
11.0m
Loading Arms
Red & White Mast with
fixed White Lights
Leading Line 239°T
N


BEACH
BEACH
Free Zone
Ribera Quay
230.00m
Warehouses
Supply Points
Oil Plants
Refrigeration
Plant
Naval Amphibious
Base
Western Quay
225.00m
Eastern Mole
ACCESS CHANNEL
Dry Dock
Dock
Fish Dock
East Quay
Western Quay
Naval Dock
Floating Dock
San Felipe Mole
Eastern
Quay
Tank Cleaning Berth
CADIZ


Port Authority dock
Fishing Dock
Santa Lucia
Quay
Dock
Concessionary
Berth
San Pedro
Quay
Alfonso XII
Quay
Small craft dock
MAIN DOCK
Jetty for small craft
Astillero
Quay
Naval Dock
Palmador
Quay
Tug Dock
Curra Quay
Dyke
Mole
Point
20m
Creek
30m
Fertilizer Plant
Fertilizer Quay
Block loading quay
ESCOMBRERAS DOCK
Low Quay
Jetty
Castle
Maese
Quay
20m
Bastarreche
Dyke Quay
Point
Island
CARTAGENA

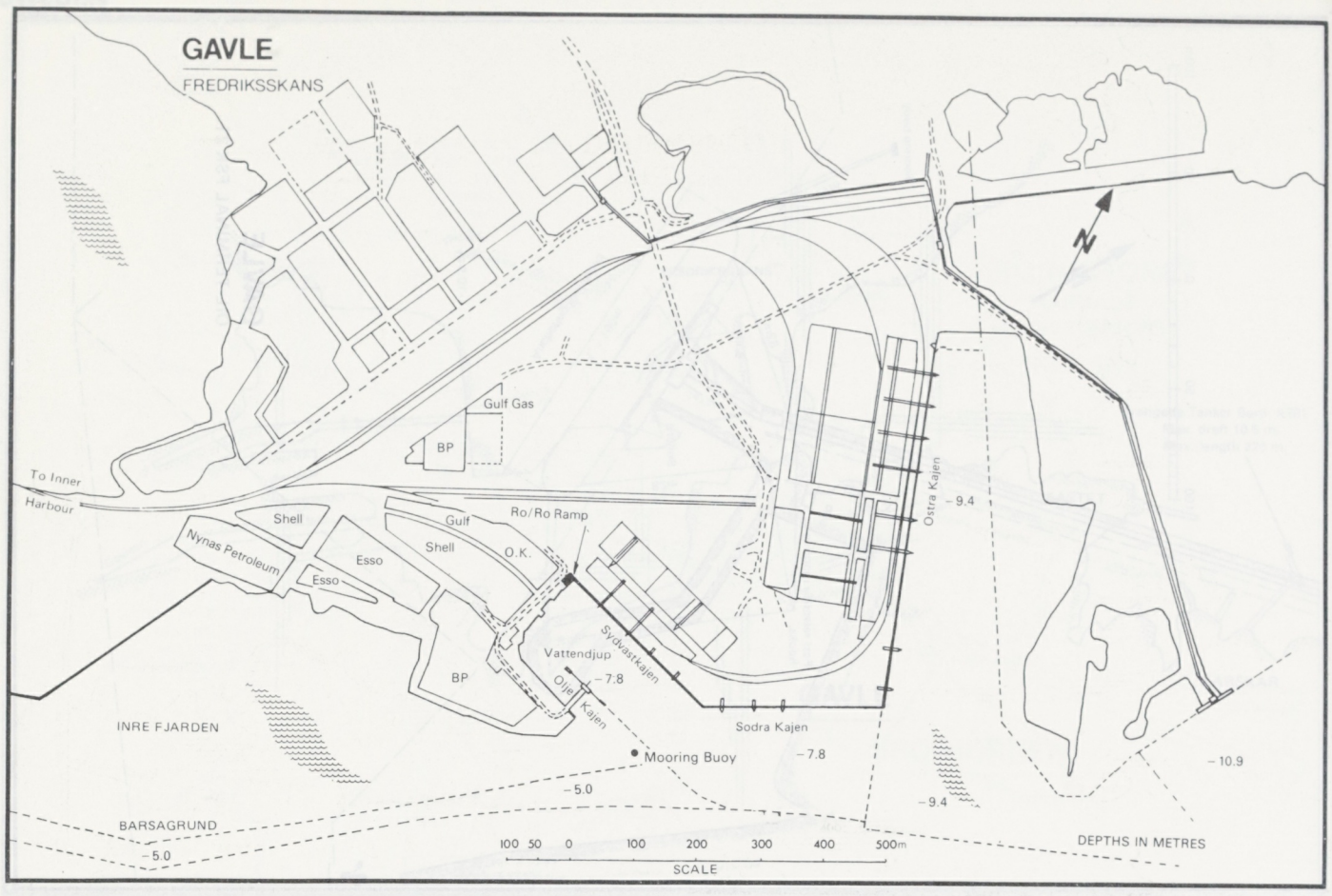
CASTELLON DE LA PLANA

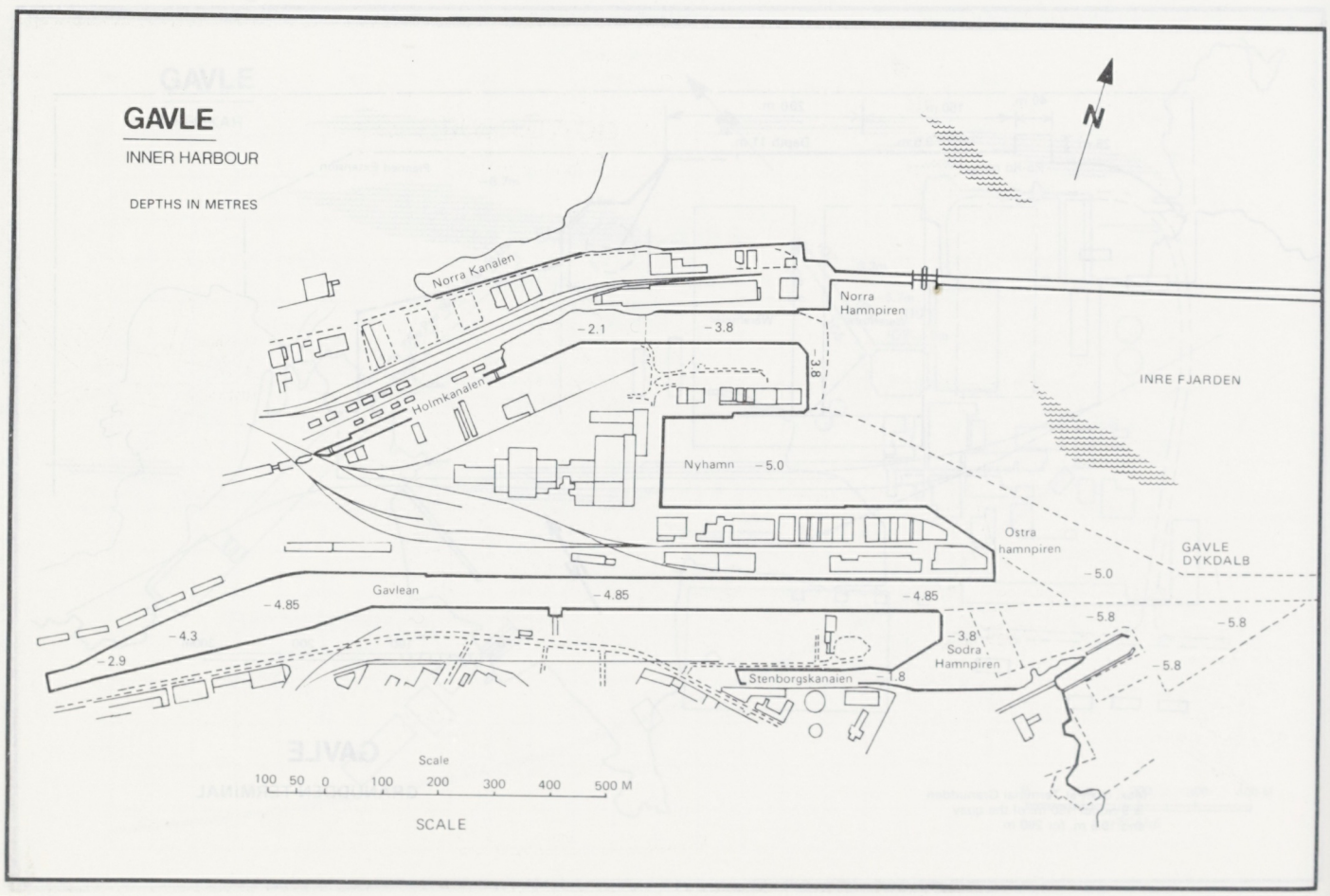


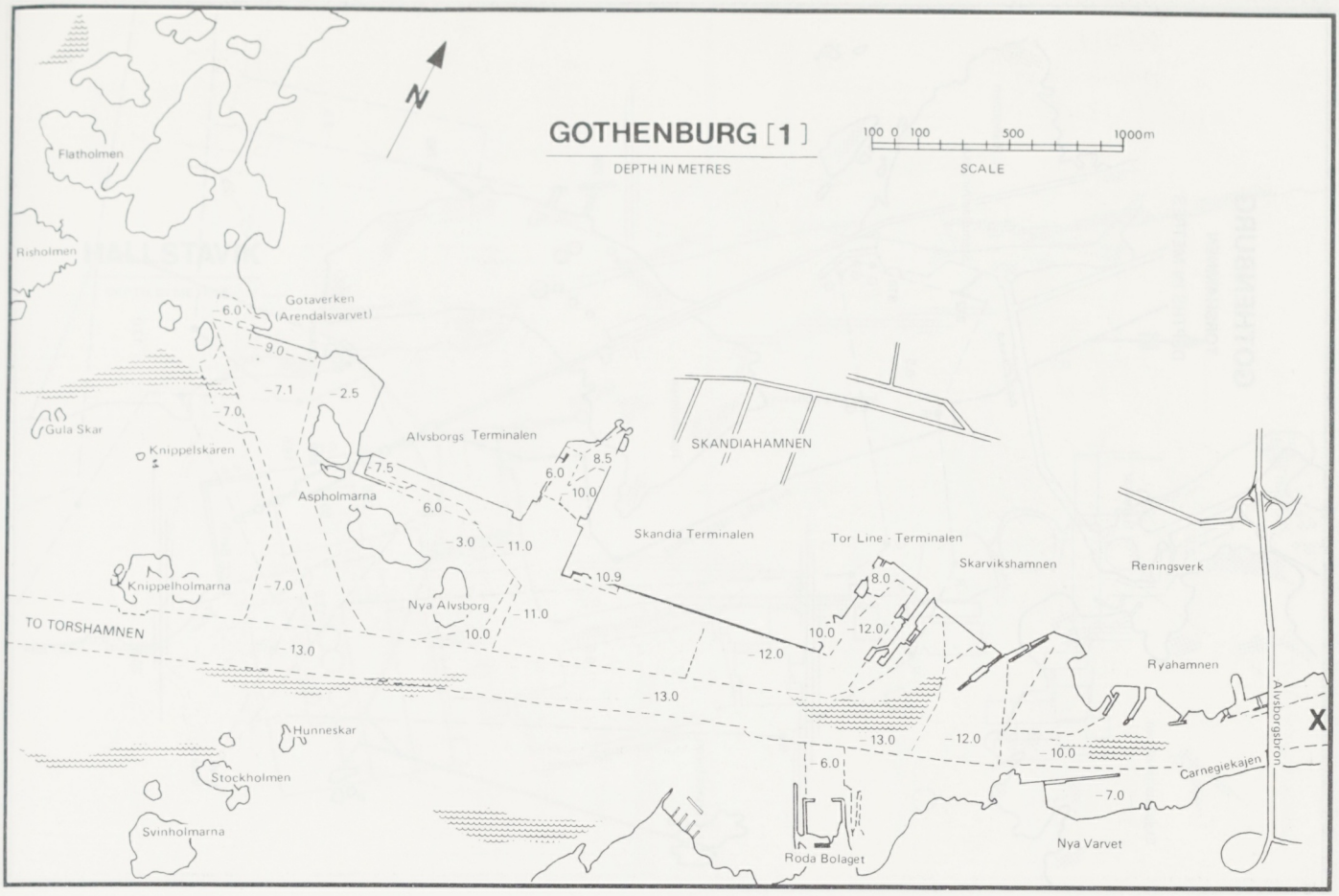


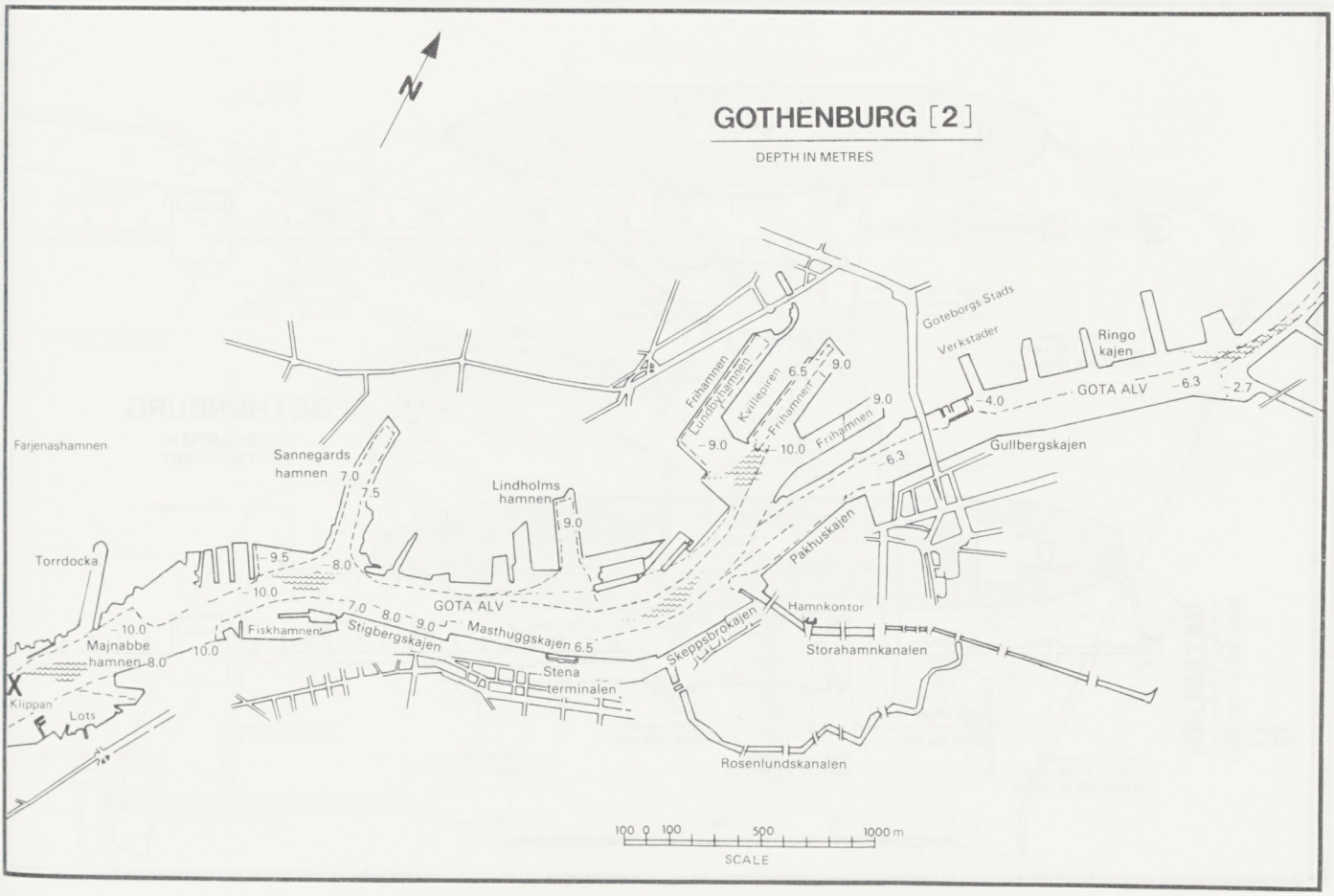
CEUTA

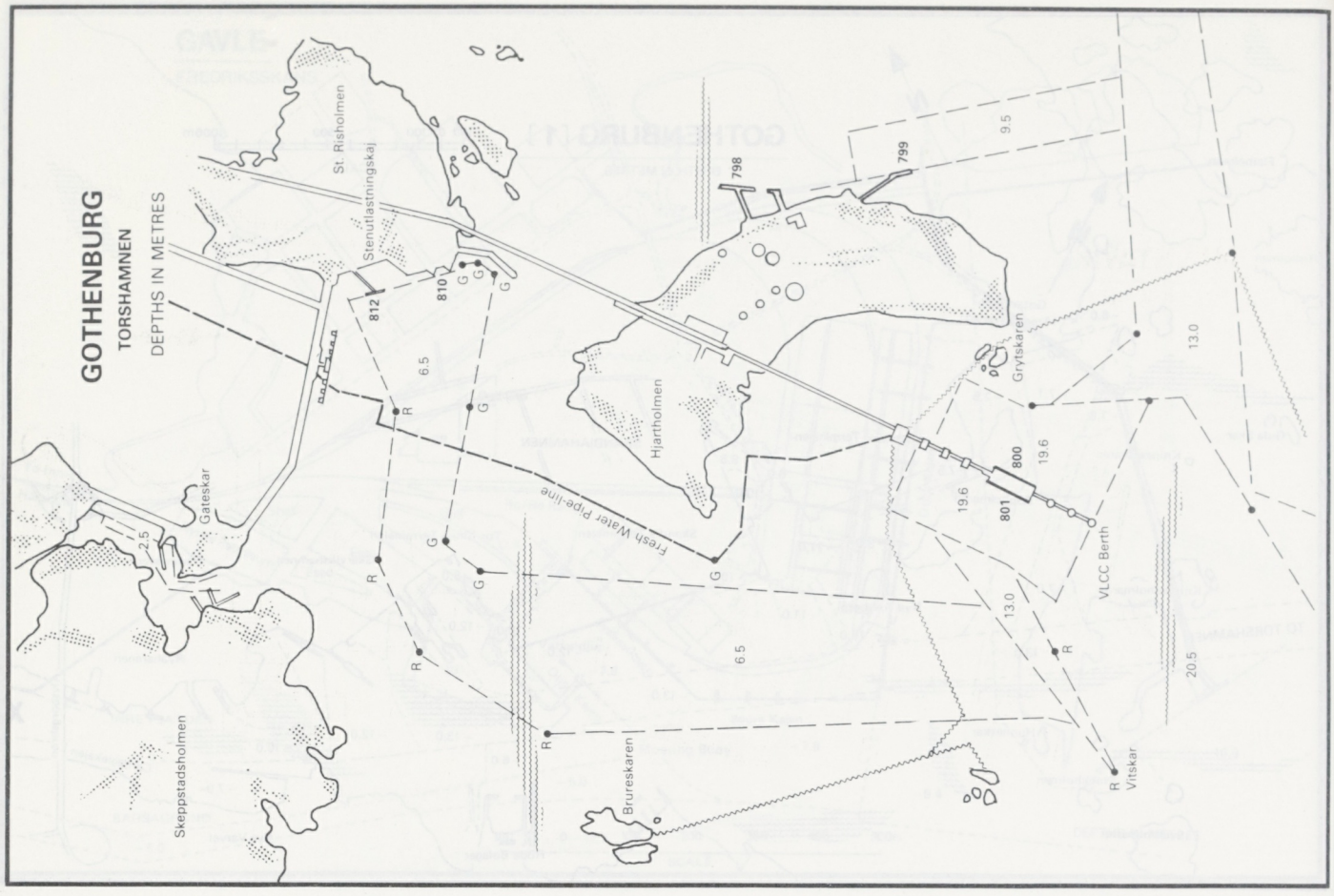
DEPTHS IN METRES

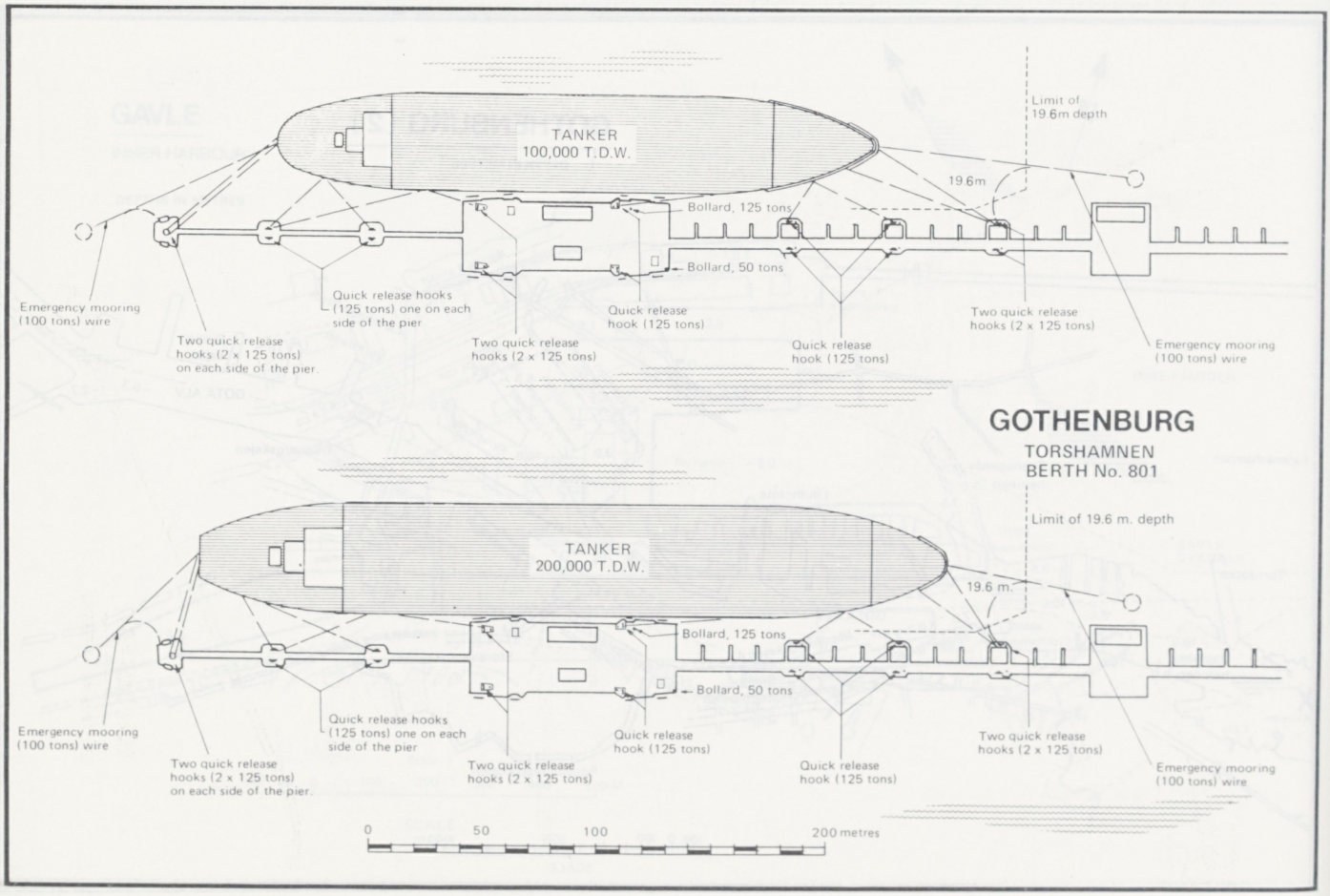

GAVLE
FREDRIKSSKANS
N
Gulf Gas
BP
To Inner Harbour
Shell
Nynas Petroleum
Esso
Esso
Gulf
Shell
O.K.
Ro/Ro Ramp
Ostra Kajen
-9.4
Sydvastkajen
Vattendjup
-7.8
Oljekajen
BP
INRE FJARDEN
Sodra Kajen
Mooring Buoy
-7.8
-10.9
-5.0
-9.4
BARSAGRUND
-5.0
100 50 0 100 200 300 400 500m
SCALE
DEPTHS IN METRES

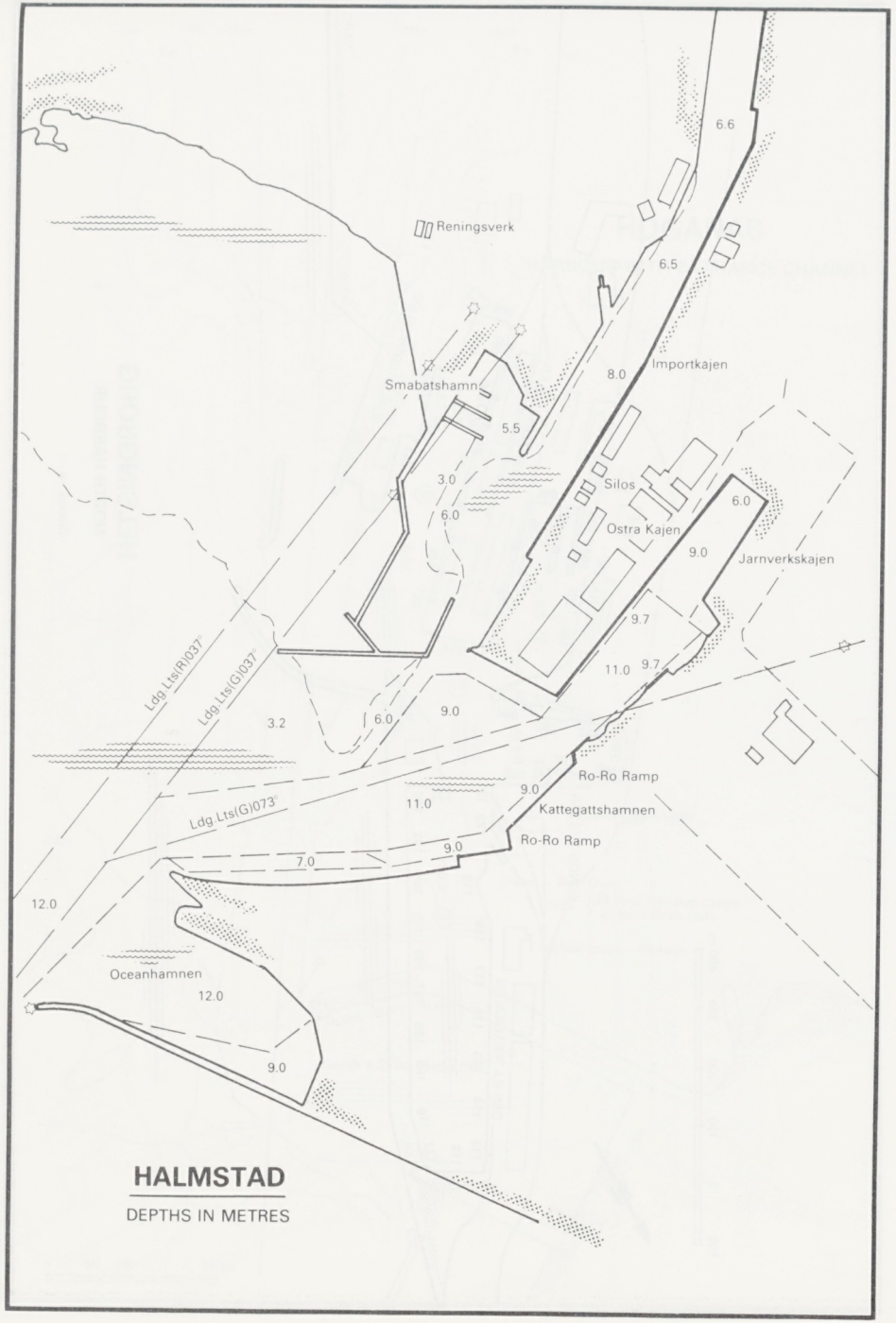

GAVLE
INNER HARBOUR
DEPTHS IN METRES
N
Norra Kanalen
Norra Hamnpiren
-2.1
-3.8
-3.8
Holmkanalen
INRE FJARDEN
Nyhamn -5.0
Ostra hamnpiren
GAVLE DYKDALB
-5.0
Gavlean
-4.85
-4.85
-4.85
-4.3
-2.9
-5.8
-5.8
-3.8
Sodra Hamnpiren
-5.8
Stenborgskanalen
-1.8
Scale
100 50 0 100 200 300 400 500 M
SCALE


GOTHENBURG [1]
DEPTH IN METRES
100 0 100 500 1000m
SCALE
N
Flatholmen
Risholmen
Gotaverken
(Arendalsvarvet)
Gula Skar
Knippelskären
Alvsborgs Terminalen
SKANDIAHAMNEN
Aspholmarna
Skandia Terminalen
Tor Line - Terminalen
Skarvikshamnen
Reningsverk
Knippelholmarna
Nya Alvsborg
TO TORSHAMNEN
Ryahamnen
Alvsborgsbron
Hunneskar
Stockholmen
Svinholmarna
Carnegiekajen
Roda Bolaget
Nya Varvet


GOTHENBURG [2]
DEPTH IN METRES
N
Farjenashamnen
Sannegards
hamnen
Lindholms
hamnen
Frihamnen
Lundbyhamnen
Kvillepiren
Frihamnen
Frihamnen
Göteborgs Stads
Verkstader
Ringo
kajen
GOTA ALV
Gullbergskajen
Pakhuskajen
Torrdocka
Majnabbe
hamnen
Fiskhamnen
Stigbergskajen
Masthuggskajen
Skeppsbrokajen
Hamnkontor
Storahamnkanalen
Stena
terminalen
Klippan
Lots
Rosenlundskanalen
100 0 100 500 1000 m
SCALE

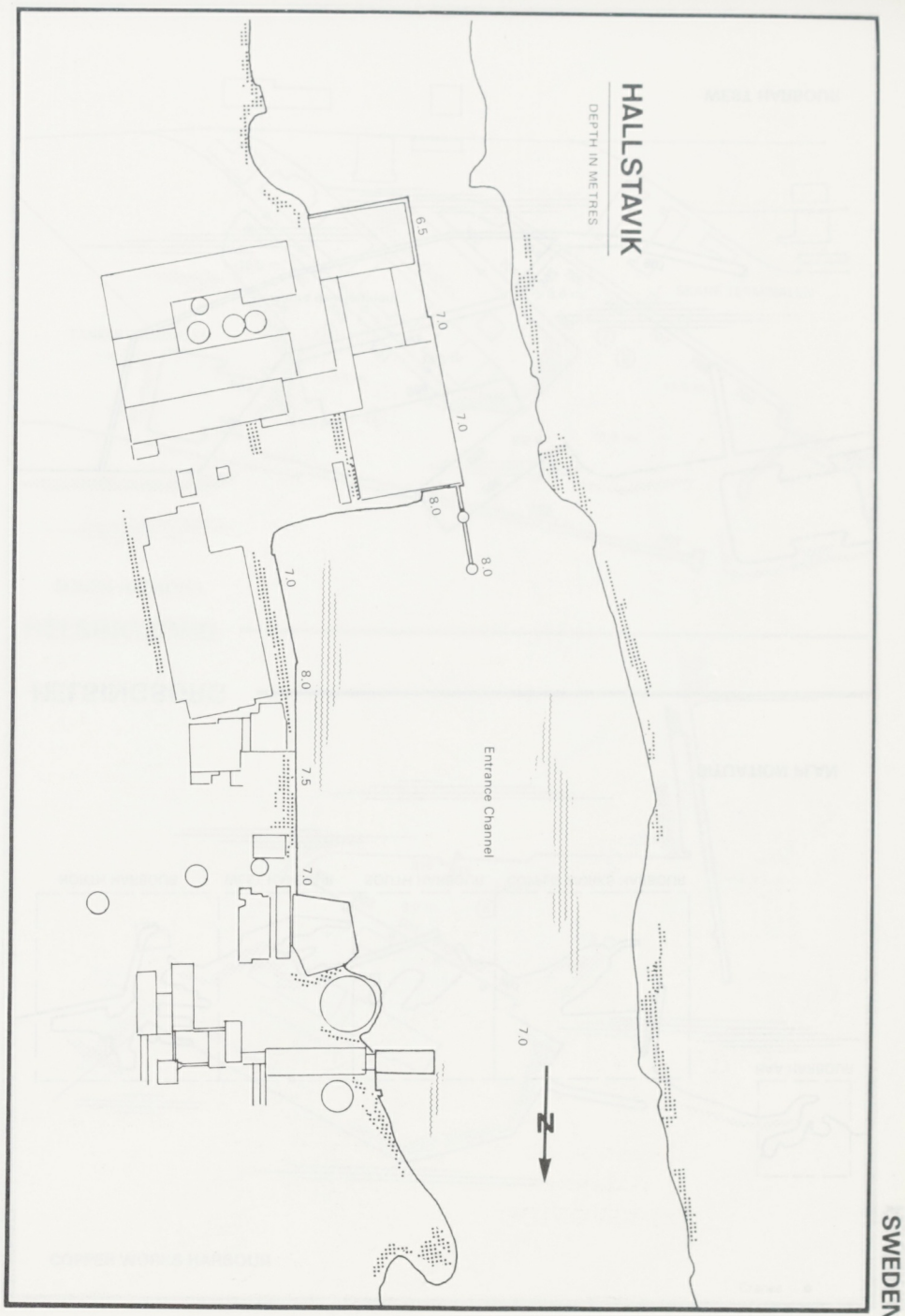

GOTHENBURG
TORSHAMNEN
DEPTHS IN METRES
St. Risholmen
Stenutlastningskaj
798
799
9.5
812
810
6.5
Hjartholmen
Grytskaren
13.0
800
19.6
801
Fresh Water Pipe-line
Gateskar
2.5
VLCC Berth
20.5
Skeppstadsholmen
Brureskaren
Vitskar


TANKER
100,000 T.D.W.
Limit of
19.6m depth
19.6m
Bollard, 125 tons
Bollard, 50 tons
Emergency mooring
(100 tons) wire
Quick release hooks
(125 tons) one on each
side of the pier
Two quick release
hooks (2 x 125 tons)
on each side of the pier.
Two quick release
hooks (2 x 125 tons)
Quick release
hook (125 tons)
Two quick release
hooks (2 x 125 tons)
Emergency mooring
(100 tons) wire
GOTHENBURG
TORSHAMNEN
BERTH No. 801
TANKER
200,000 T.D.W.
Limit of 19.6 m. depth
19.6 m.
Bollard, 125 tons
Bollard, 50 tons
Emergency mooring
(100 tons) wire
Quick release hooks
(125 tons) one on each
side of the pier
Two quick release
hooks (2 x 125 tons)
on each side of the pier.
Two quick release
hooks (2 x 125 tons)
Quick release
hook (125 tons)
Quick release
hook (125 tons)
Two quick release
hooks (2 x 125 tons)
Emergency mooring
(100 tons) wire
0
50
100
200 metres



HALMSTAD

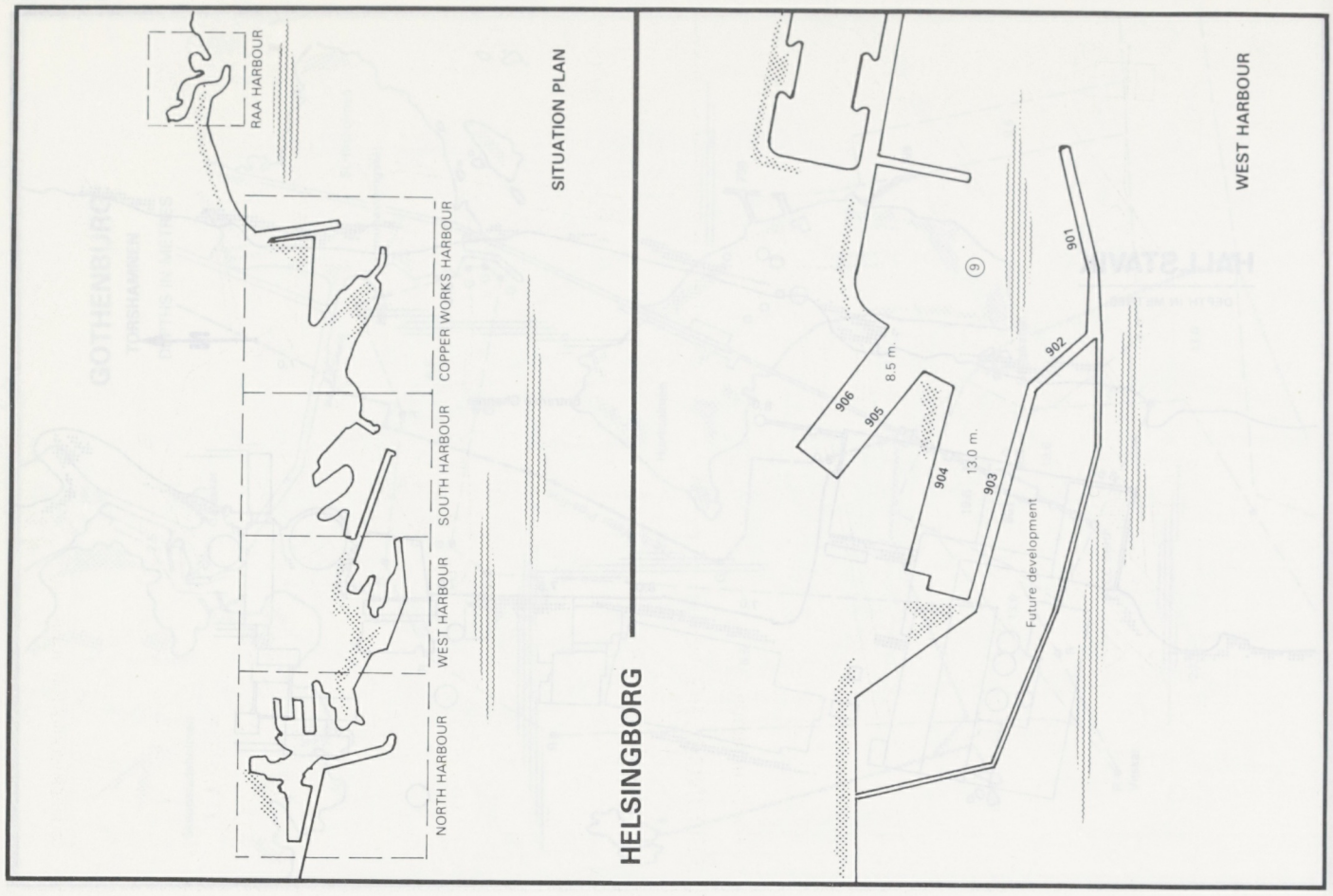
DEPTHS IN METRES

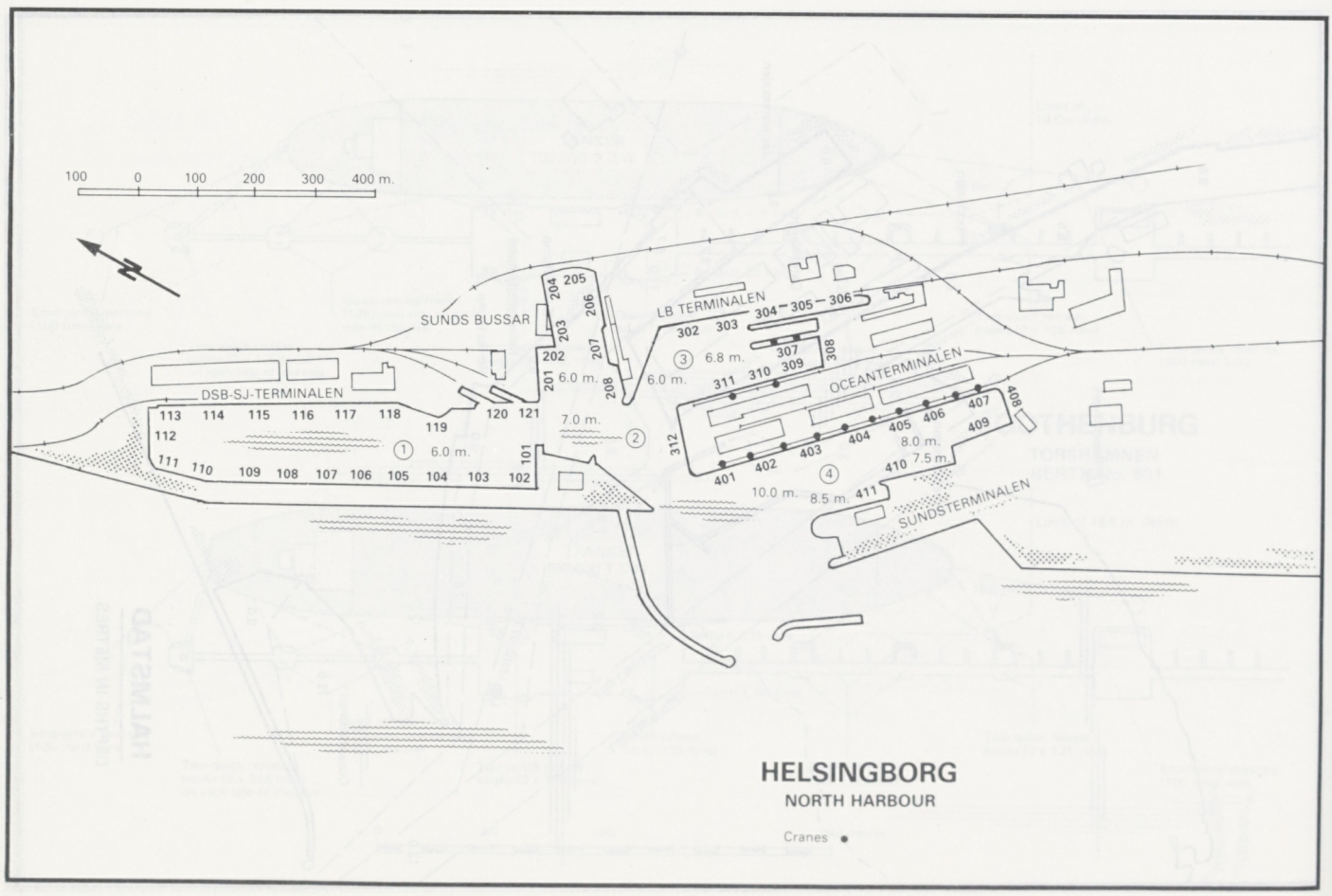


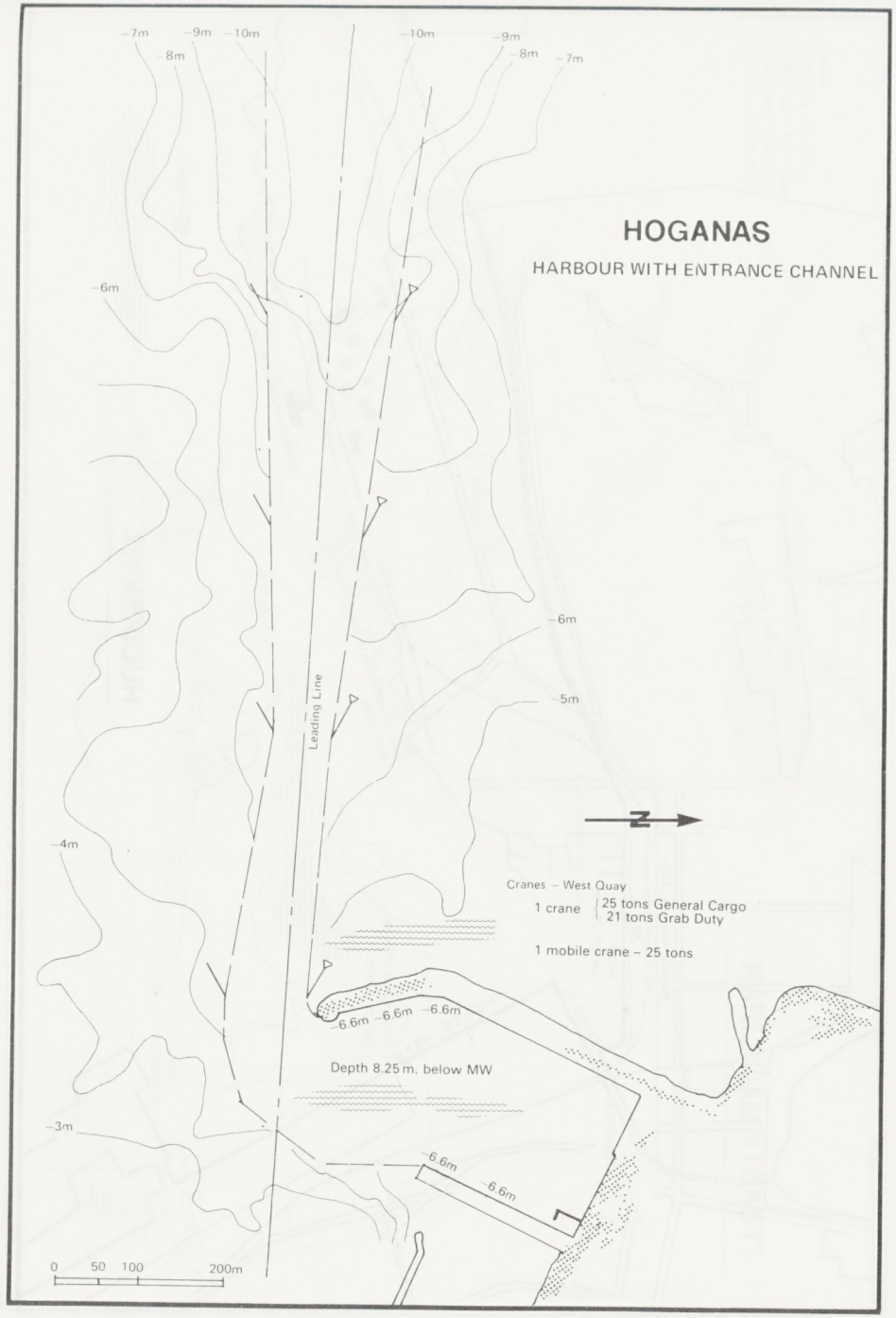
HALLSTAVIK

DEPTH IN METRES

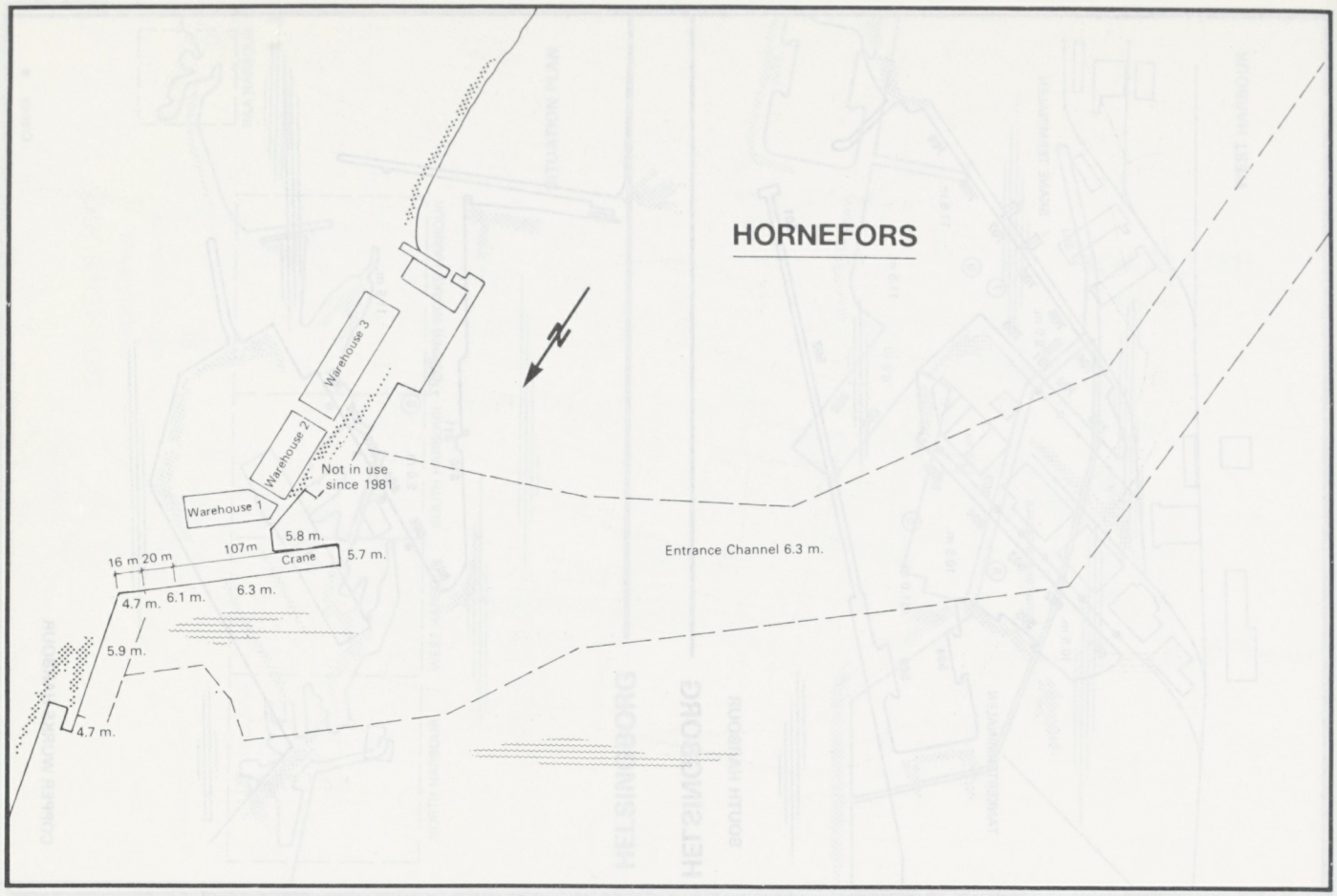
SWEDEN

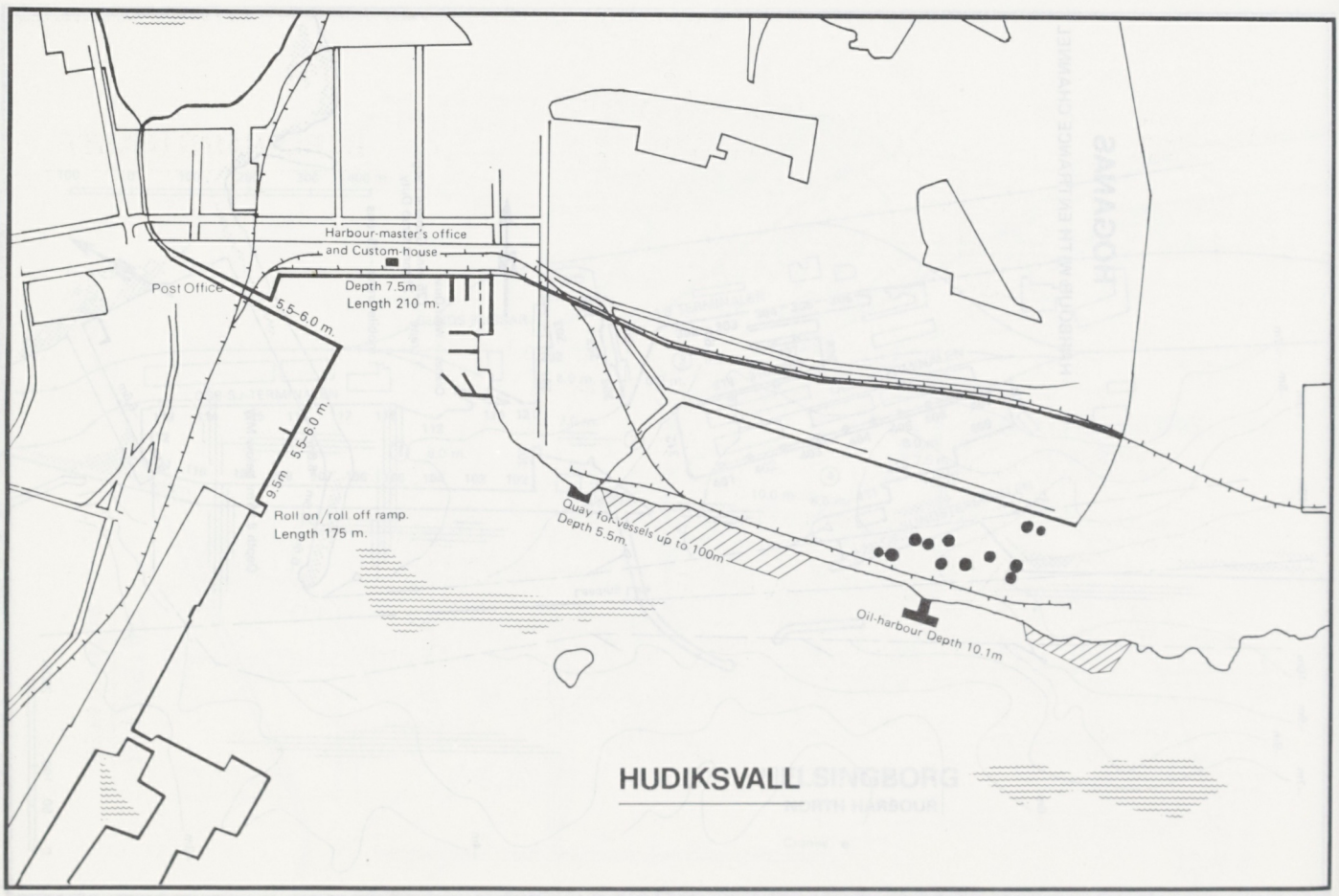

SITUATION PLAN
HELSINGBORG
RAA HARBOUR
COPPER WORKS HARBOUR
SOUTH HARBOUR
WEST HARBOUR
NORTH HARBOUR
WEST HARBOUR
901
902
903
904
905
906
8.5 m.
13.0 m.
Future development

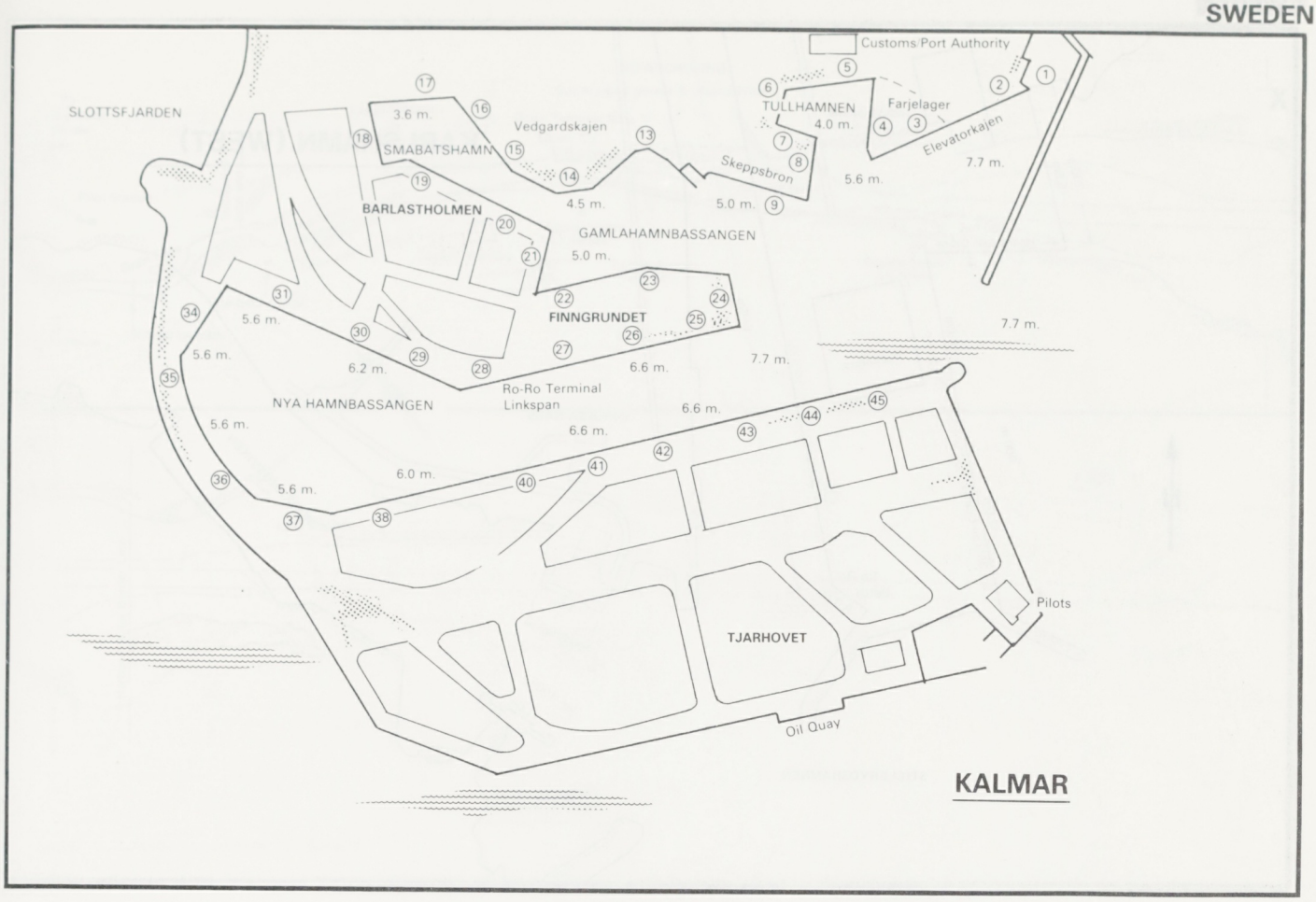

100 0 100 200 300 400 m.
SUNDS BUSSAR
DSB-SJ-TERMINALEN
LB TERMINALEN
OCEANTERMINALEN
SUNDSTERMINALEN
6.0 m.
6.8 m.
7.0 m.
8.0 m.
7.5 m.
10.0 m.
8.5 m.
HELSINGBORG
NORTH HARBOUR
Cranes •

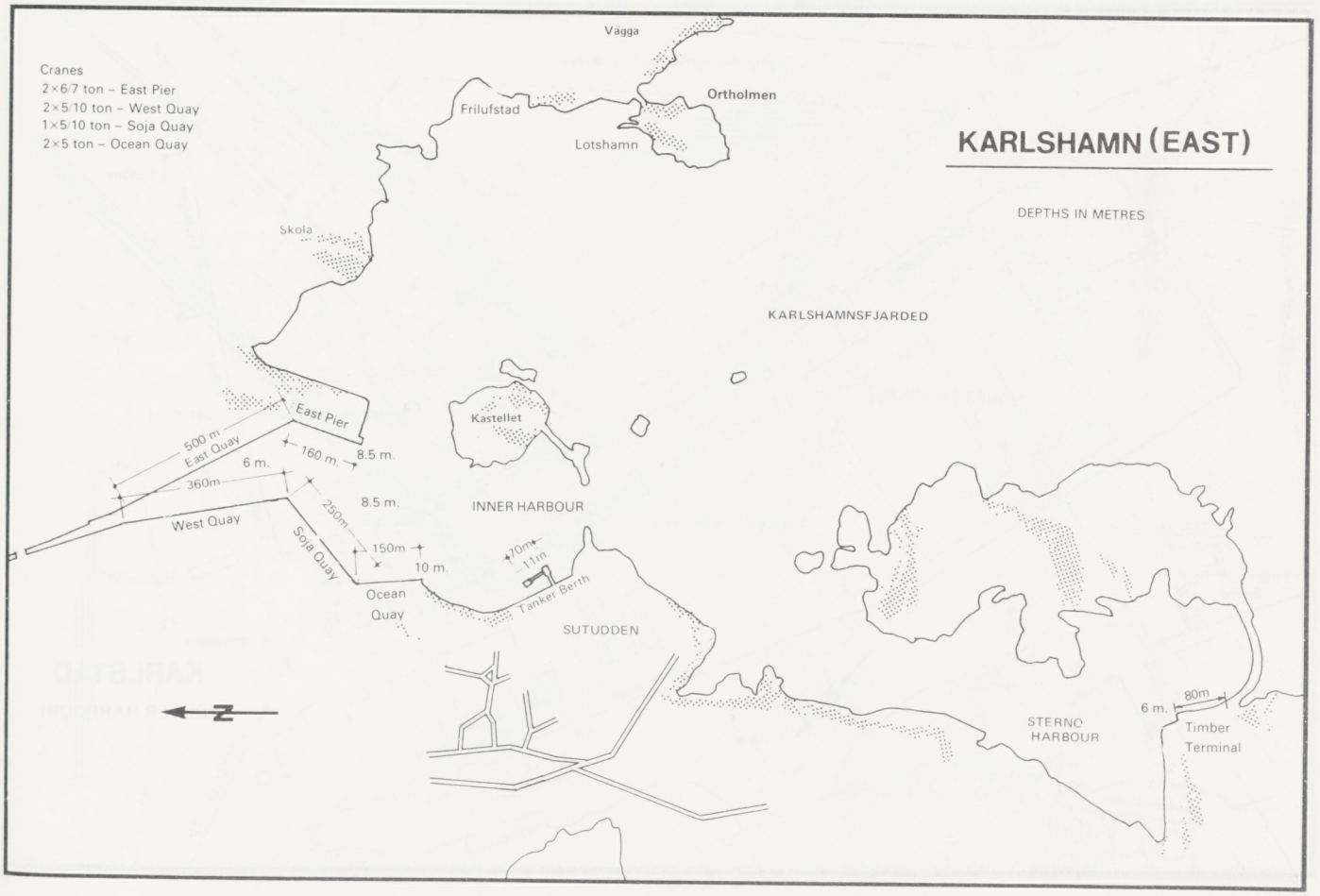

HOGANAS
HARBOUR WITH ENTRANCE CHANNEL
-7m
-9m
-10m
-10m
-9m
-8m
-7m
8m
-6m
-6m
-5m
Leading Line
N
-4m
Cranes – West Quay
1 crane
25 tons General Cargo
21 tons Grab Duty
1 mobile crane – 25 tons
-6.6m
-6.6m
-6.6m
Depth 8.25 m. below MW
-3m
-6.6m
-6.6m
0
50
100
200m

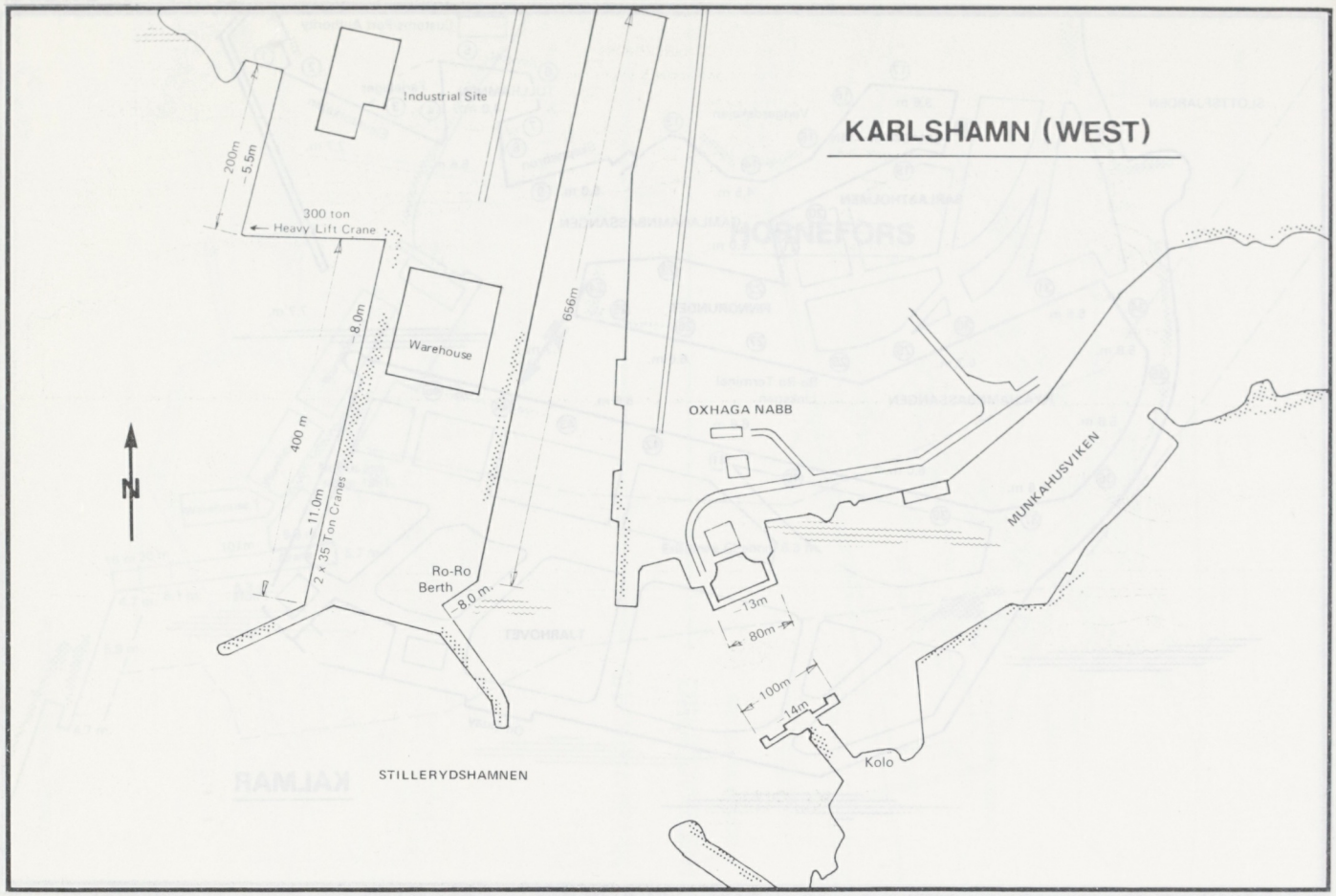
601
602
603
604
605
505
504
503
502
501
10.5 m.
11.0 m.
10.5 m.
11.5 m.
11.5 m.
6
5
TANKERTERMINALEN
703
704
705
706
707
708
709
702
701
700
8.0 m.
7
SKANE TERMINALEN
SOUTH HARBOUR
HELSINGBORG
810
811
806
805
804
803
802
801
7.0 m.
9.0 m.
8
11.5 m.
COPPER WORKS HARBOUR
Cranes •

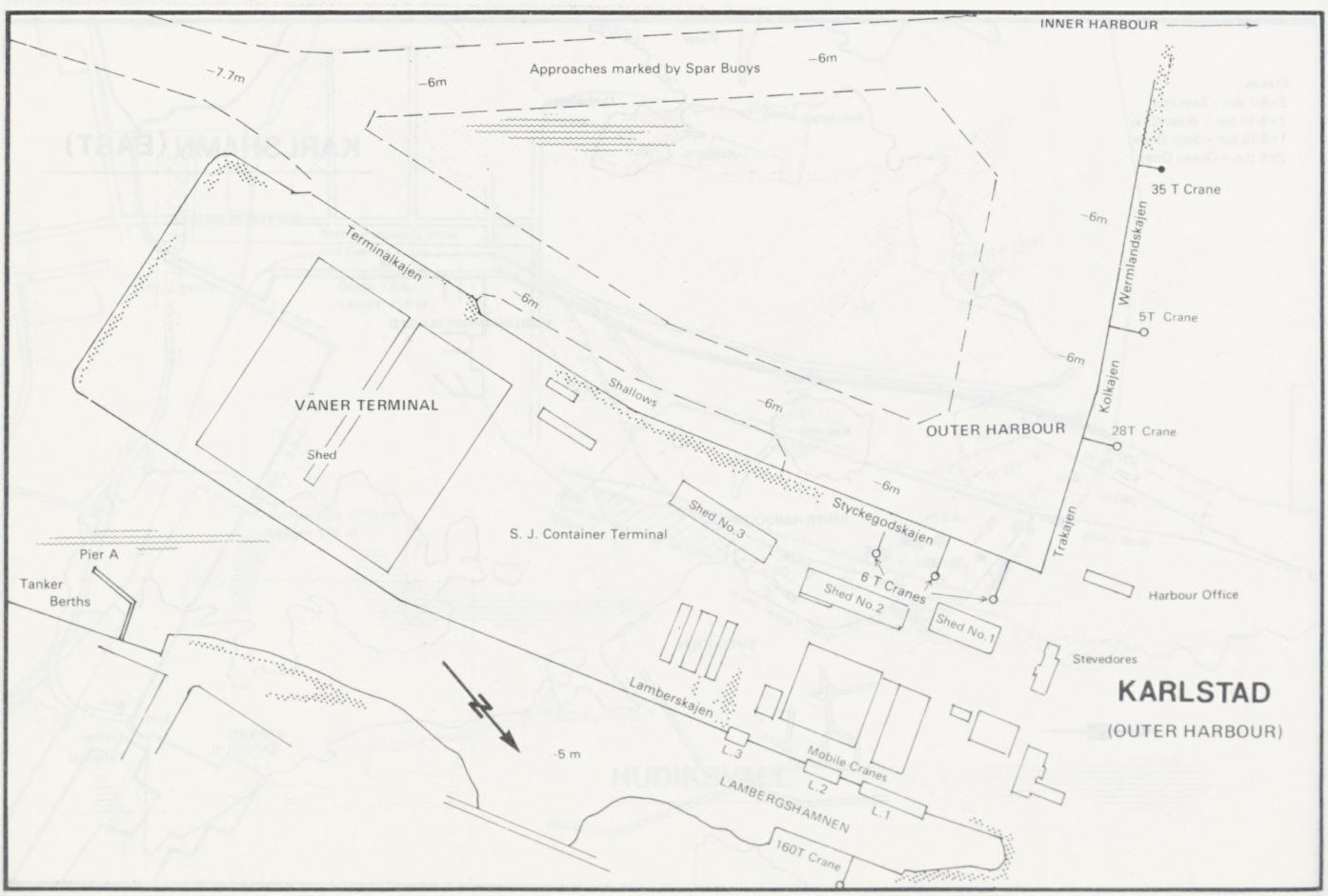

HORNEFORS
Warehouse 3
Warehouse 2
Warehouse 1
Not in use
since 1981
5.8 m.
16 m 20 m
107m
Crane
5.7 m.
6.3 m.
4.7 m. 6.1 m.
5.9 m.
4.7 m.
Entrance Channel 6.3 m.

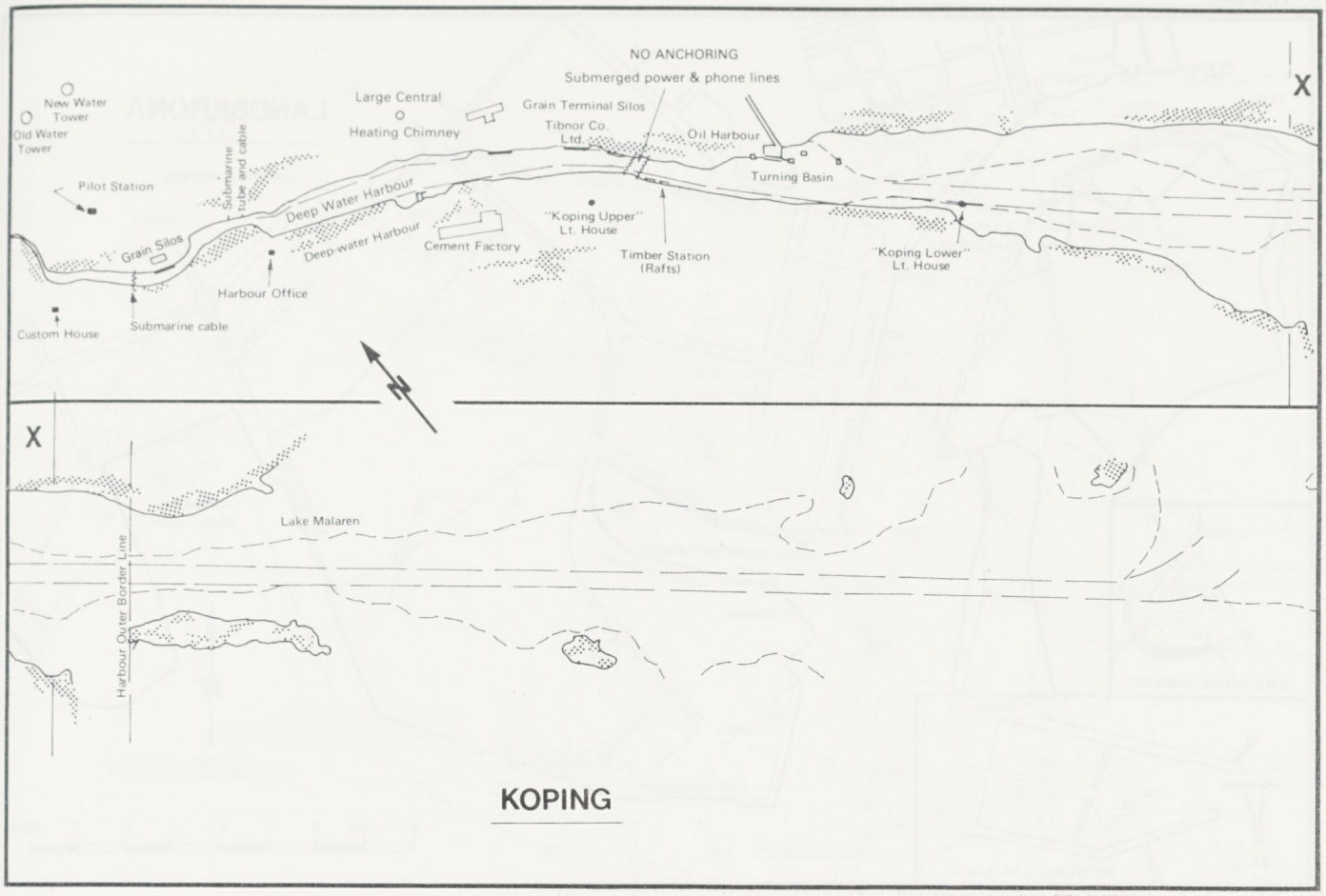

Harbour-master's office
and Custom-house
Post Office
Depth 7.5m
Length 210 m.
5.5-6.0 m.
5.5-6.0 m.
9.5m
Roll on/roll off ramp.
Length 175 m.
Quay for vessels up to 100m
Depth 5.5m.
Oil-harbour Depth 10.1m
HUDIKSVALL


Customs/Port Authority
SLOTTSFJARDEN
3.6 m.
Vedgardskajen
SMABATSHAMN
TULLHAMNEN
4.0 m.
Farjelager
Elevatorkajen
7.7 m.
Skeppsbron
5.6 m.
BARLASTHOLMEN
4.5 m.
5.0 m.
GAMLAHAMNBASSANGEN
5.0 m.
FINNGRUNDET
5.6 m.
5.6 m.
6.2 m.
6.6 m.
7.7 m.
7.7 m.
NYA HAMNBASSANGEN
Ro-Ro Terminal
Linkspan
6.6 m.
6.6 m.
5.6 m.
6.0 m.
5.6 m.
Pilots
TJARHOVET
Oil Quay
KALMAR

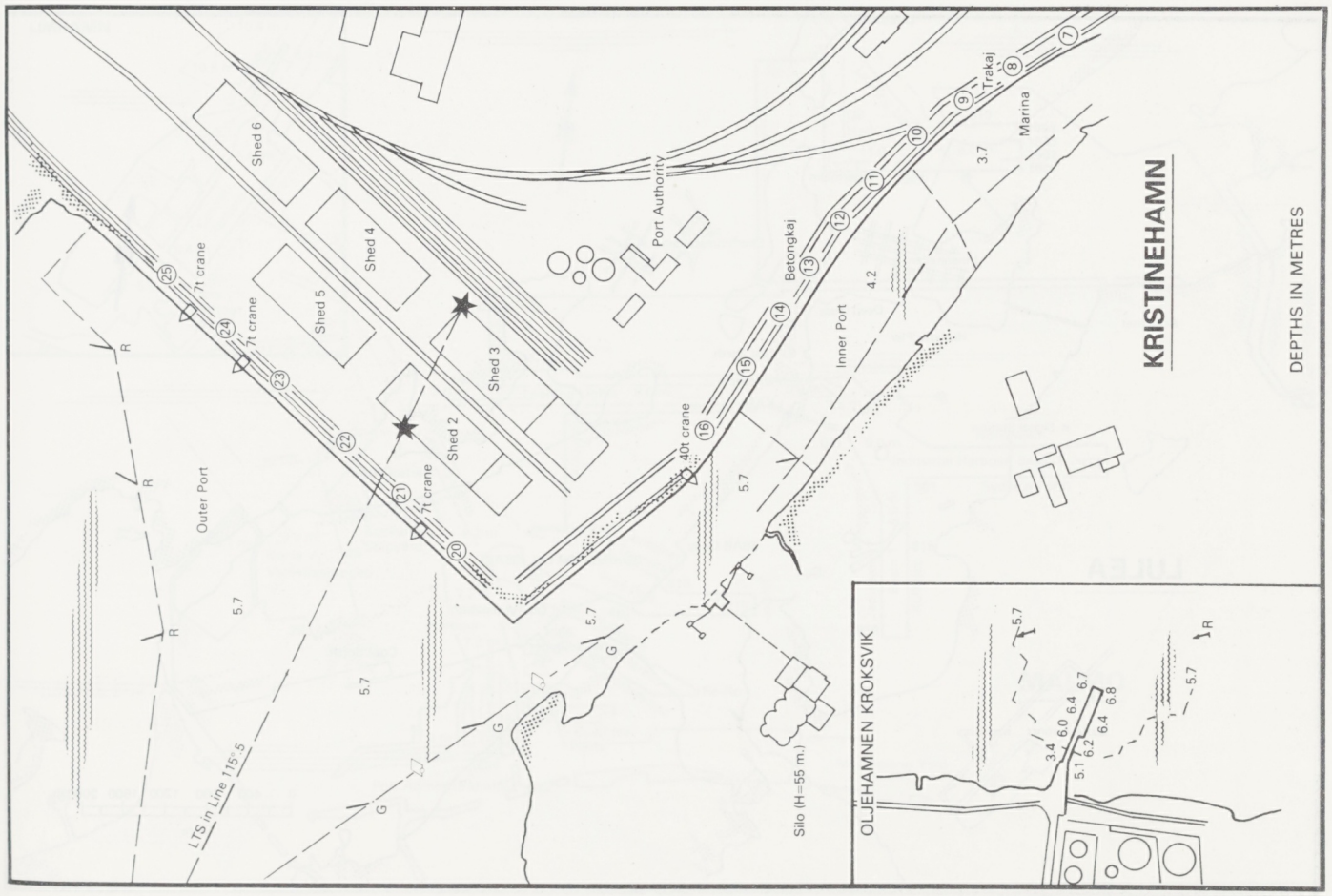

Cranes
2×6/7 ton – East Pier
2×5/10 ton – West Quay
1×5/10 ton – Soja Quay
2×5 ton – Ocean Quay
Vägga
Ortholmen
Frilufstad
Lotshamn
KARLSHAMN (EAST)
DEPTHS IN METRES
Skola
KARLSHAMNSFJARDED
Kastellet
East Pier
500 m
East Quay
6 m.
160 m.
8.5 m.
360m
8.5 m.
INNER HARBOUR
West Quay
250m
Soja Quay
150m
10 m.
10m
11m
Tanker Berth
Ocean
Quay
SUTUDDEN
N
6 m.
80m
STERNO
HARBOUR
Timber
Terminal


KARLSHAMN (WEST)
Industrial Site
200m
5.5m
300 ton
Heavy Lift Crane
8.0m
Warehouse
656m
400 m
11.0m
2 x 35 Ton Cranes
Ro-Ro
Berth
8.0 m.
OXHAGA NABB
MUNKAHUSVIKEN
13m
80m
100m
14m
Kolo
STILLERYDSHAMNEN
N


INNER HARBOUR
Approaches marked by Spar Buoys
7.7m
6m
35 T Crane
Terminalkajen
Wermlandskajen
5T Crane
Kolkajen
28T Crane
VÄNER TERMINAL
Shed
Shallows
OUTER HARBOUR
Styckegodskajen
Trakajen
S. J. Container Terminal
Shed No.3
Pier A
Tanker
Berths
6 T Cranes
Shed No.2
Shed No.1
Harbour Office
Stevedores
KARLSTAD
(OUTER HARBOUR)
Lamberskajen
5 m
L.3
Mobile Cranes
L.2
L.1
LAMBERGSHAMNEN
160T Crane
N

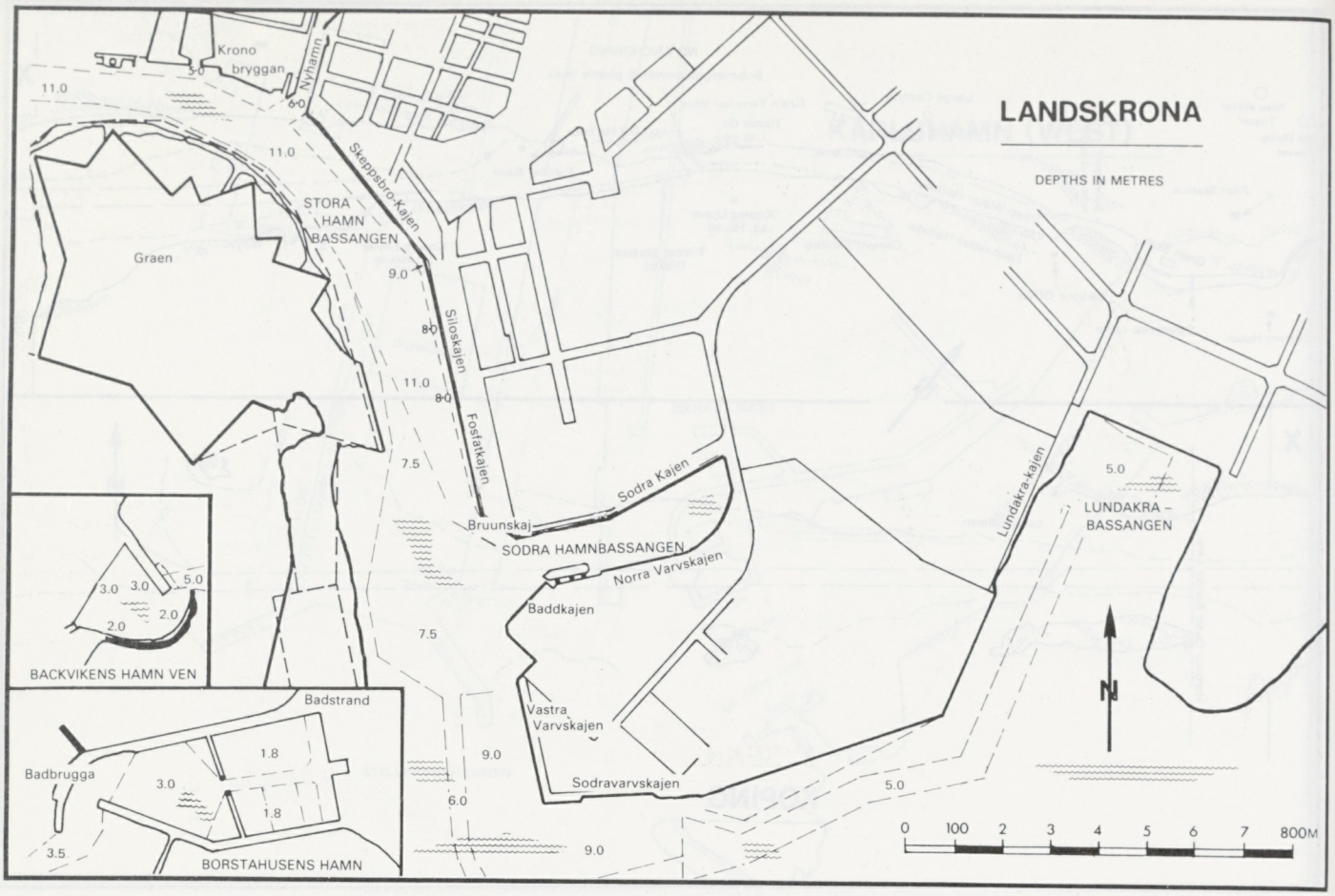


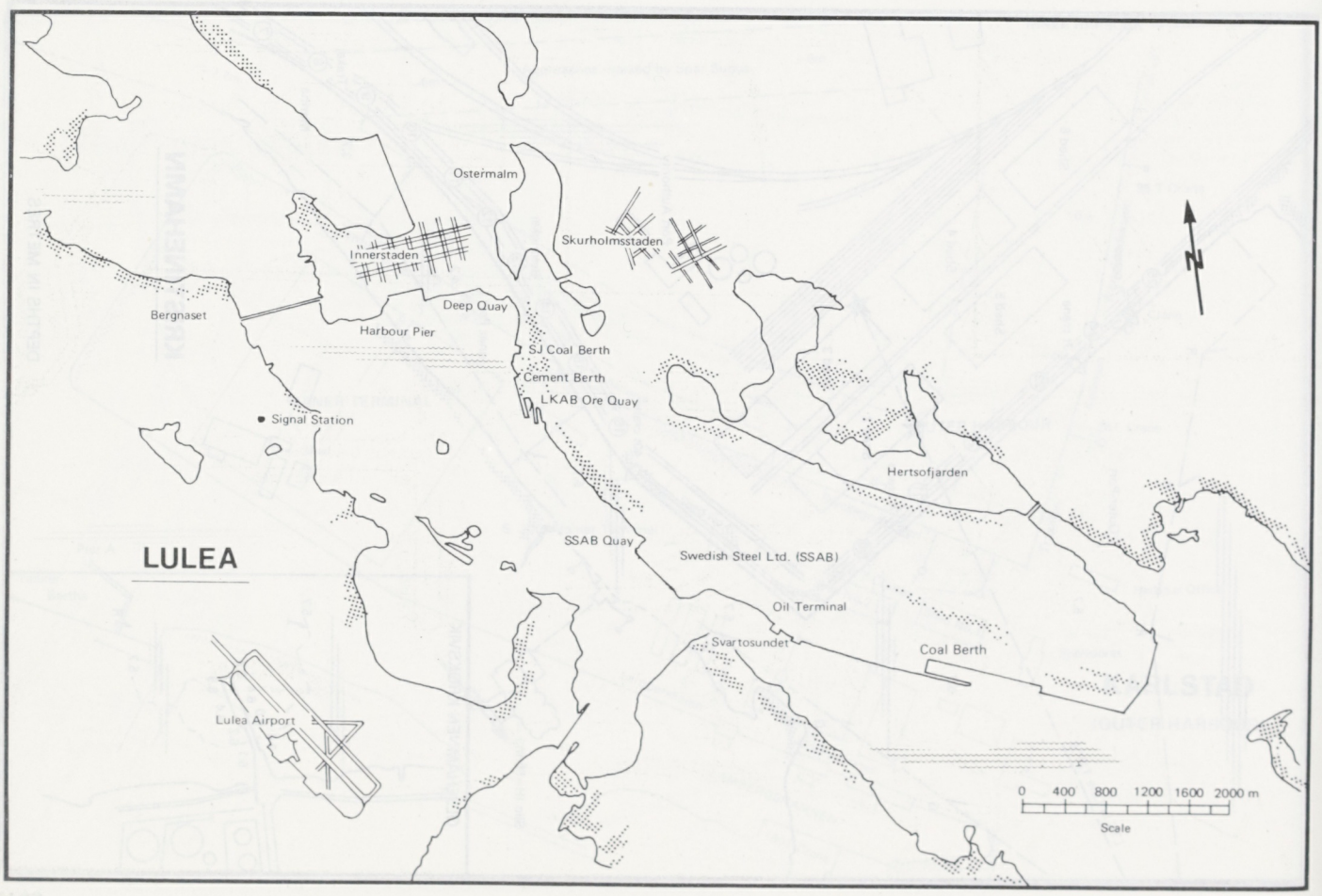
KOPING

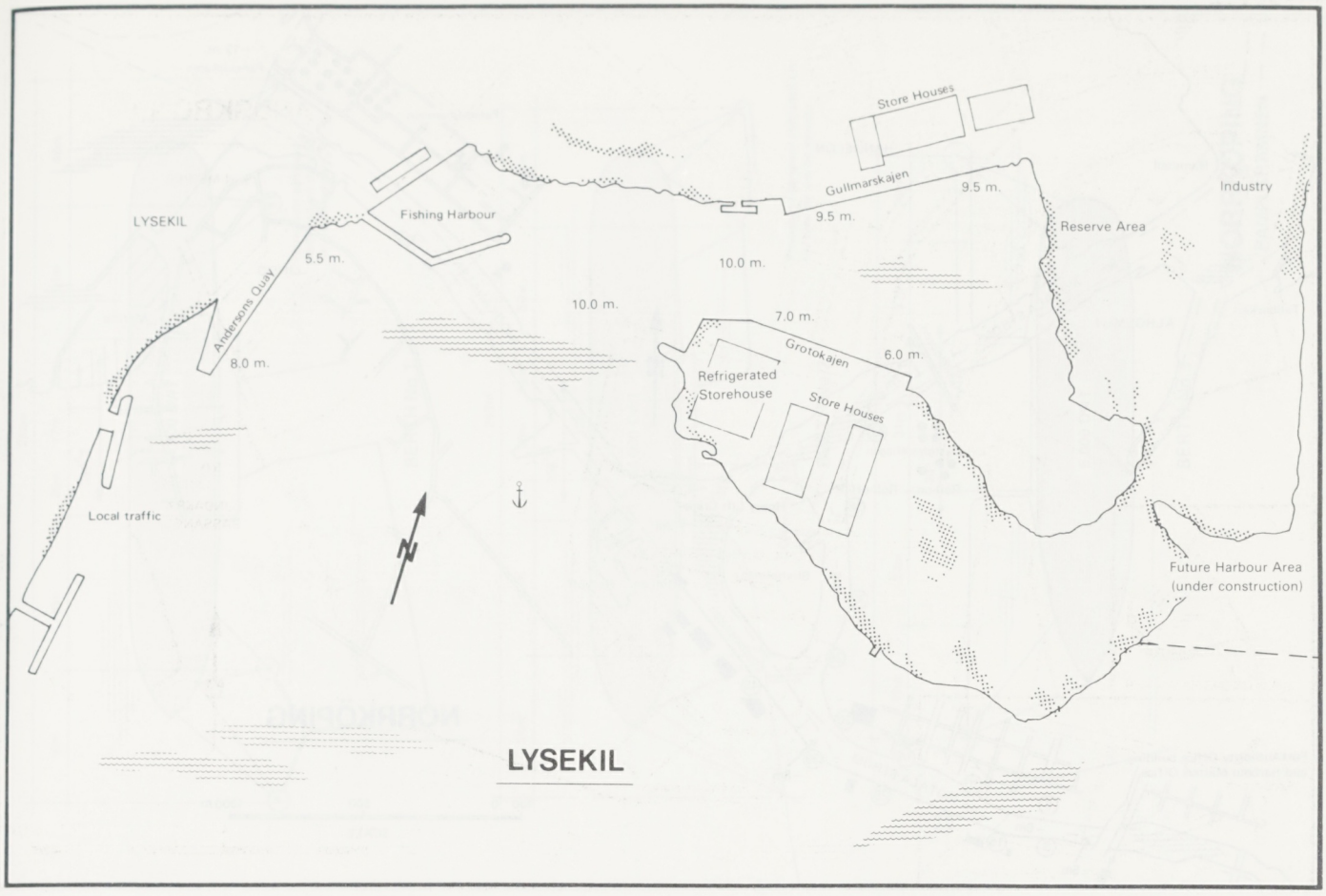


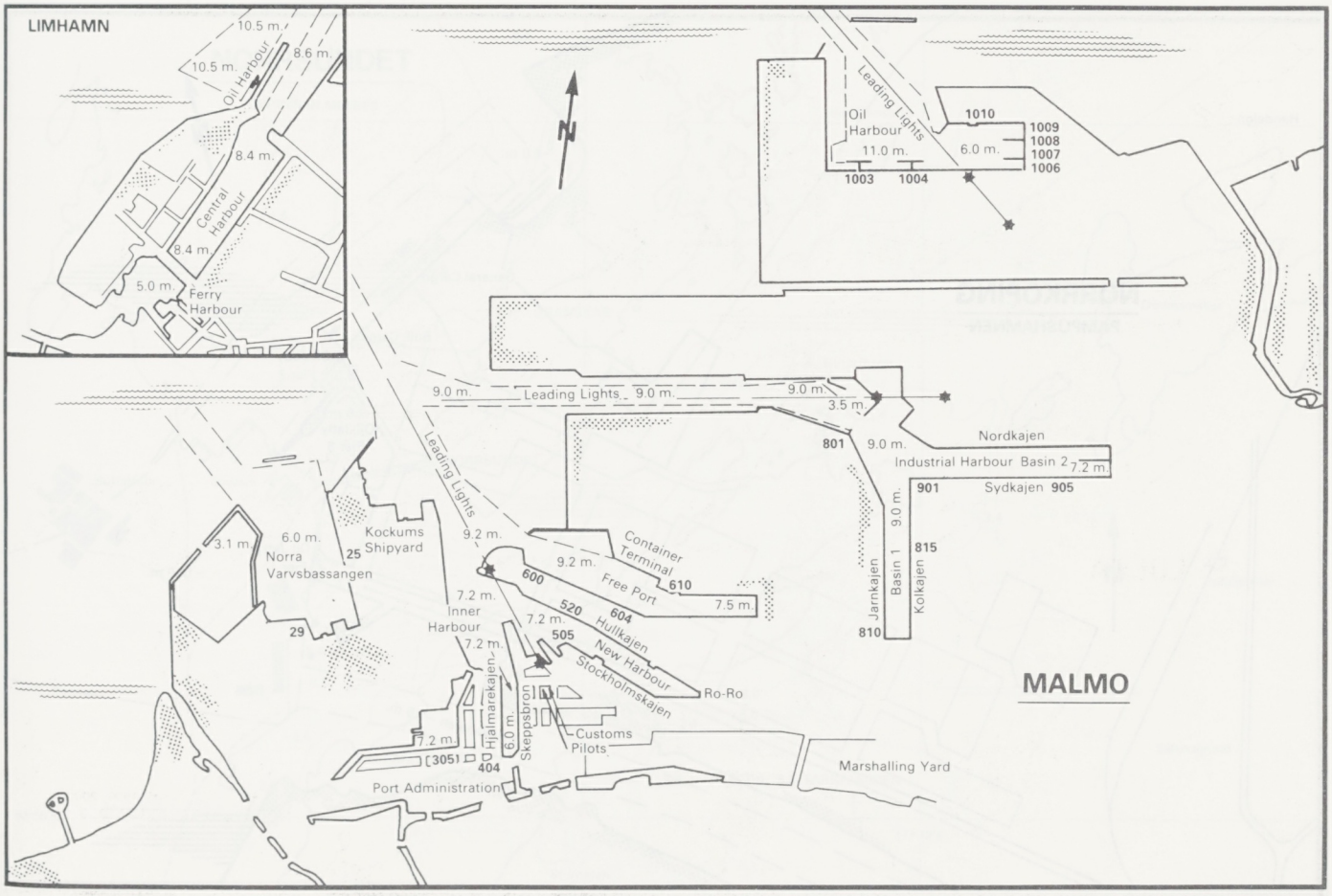
KRISTINEHAMN

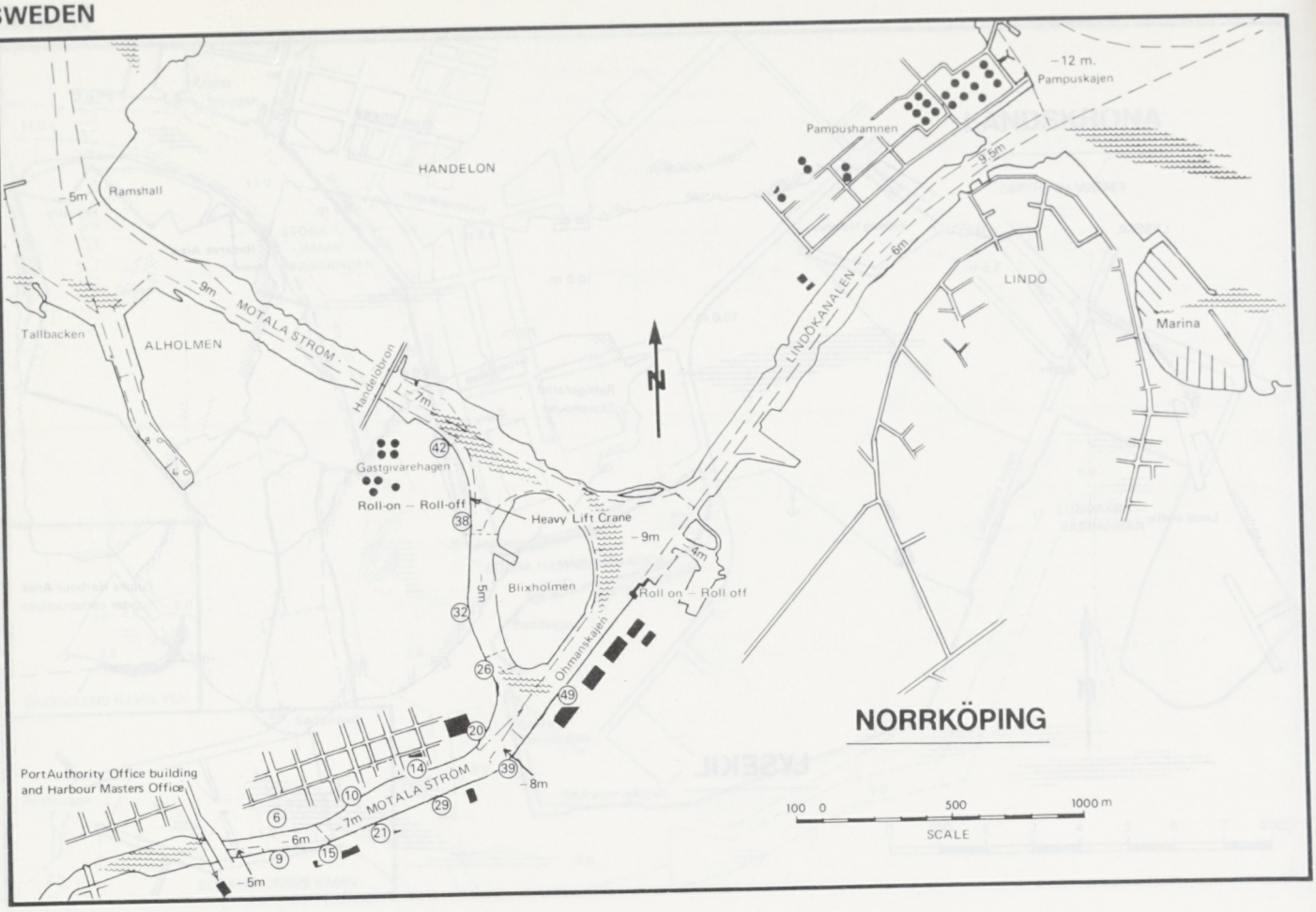
DEPTHS IN METRES

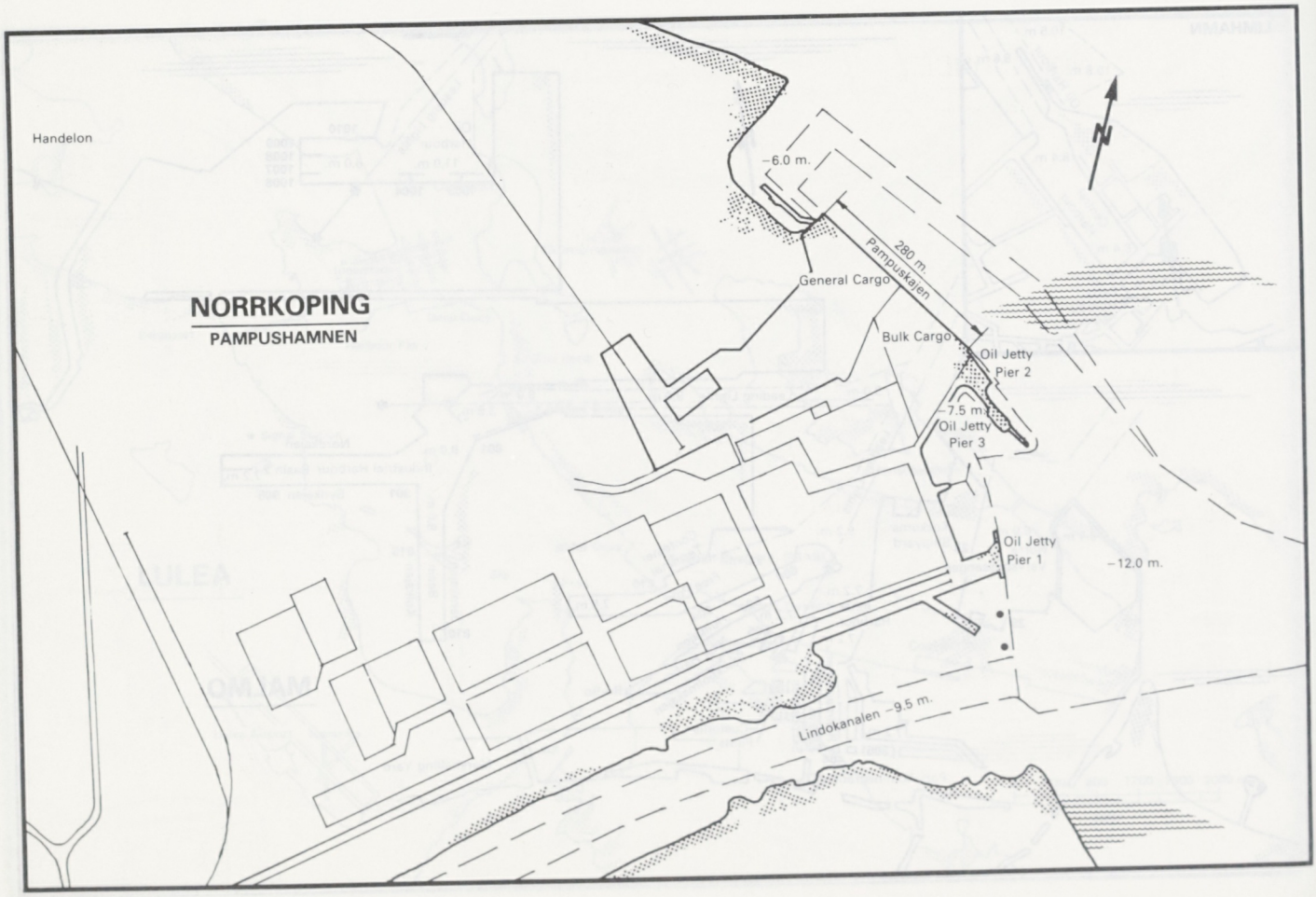

LANDSKRONA
DEPTHS IN METRES
Krono bryggan
Nyhamn
Skeppsbro-Kajen
STORA HAMN BASSANGEN
Graen
Siloskajen
Foståtkajen
Sodra Kajen
Bruunskaj
SODRA HAMNBASSANGEN
Norra Varvskajen
Baddkajen
Vastra Varvskajen
Sodravarvskajen
Lundakra-kajen
LUNDAKRA - BASSANGEN
BACKVIKENS HAMN VEN
Badstrand
Badbrugga
BORSTAHUSENS HAMN
N
0 100 2 3 4 5 6 7 800M

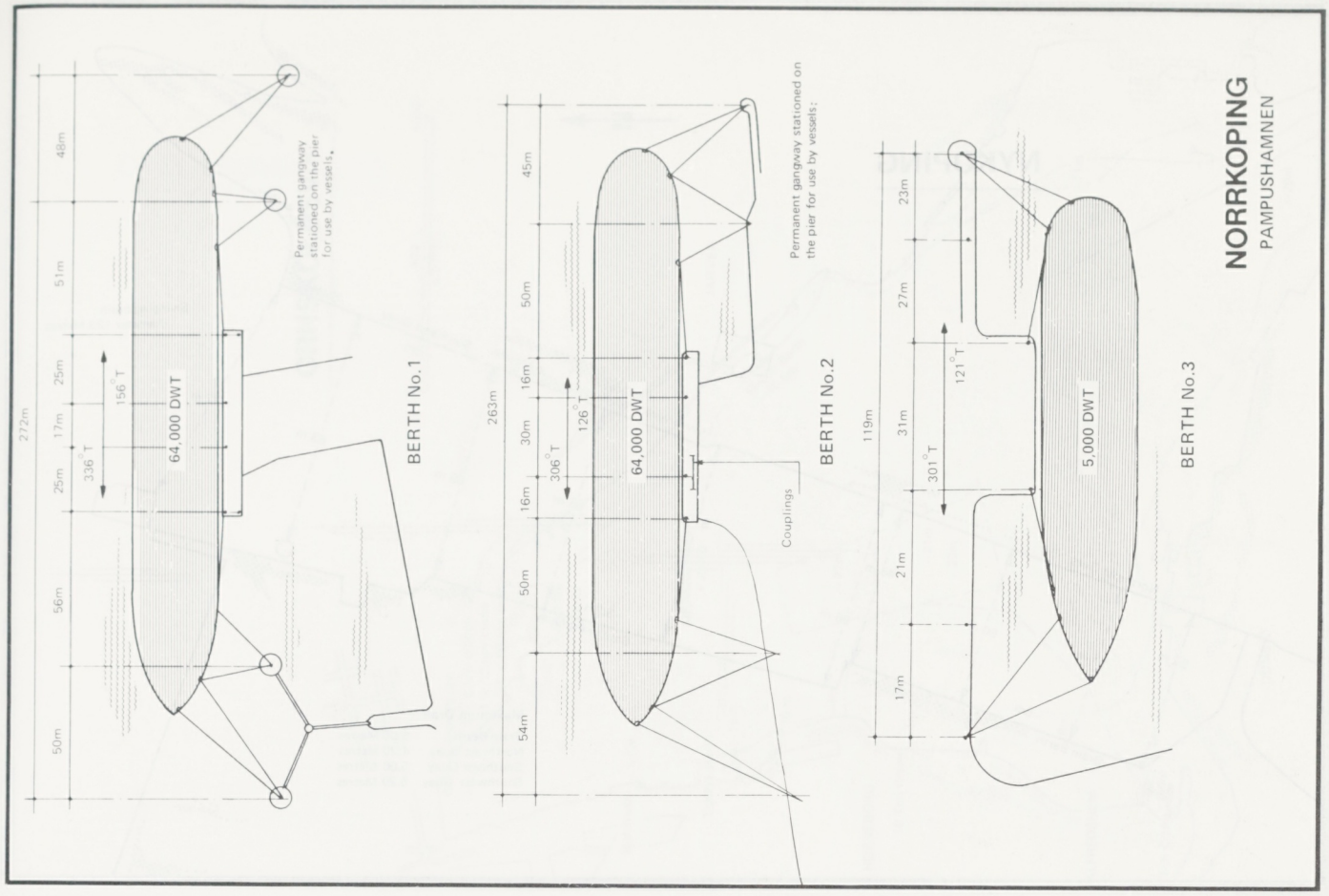

LULEA
Ostermalm
Innerstaden
Skurholmsstaden
Bergnaset
Deep Quay
Harbour Pier
SJ Coal Berth
Cement Berth
LKAB Ore Quay
Signal Station
Hertsofjarden
SSAB Quay
Swedish Steel Ltd. (SSAB)
Oil Terminal
Svartosundet
Coal Berth
Lulea Airport
N
0 400 800 1200 1600 2000 m
Scale

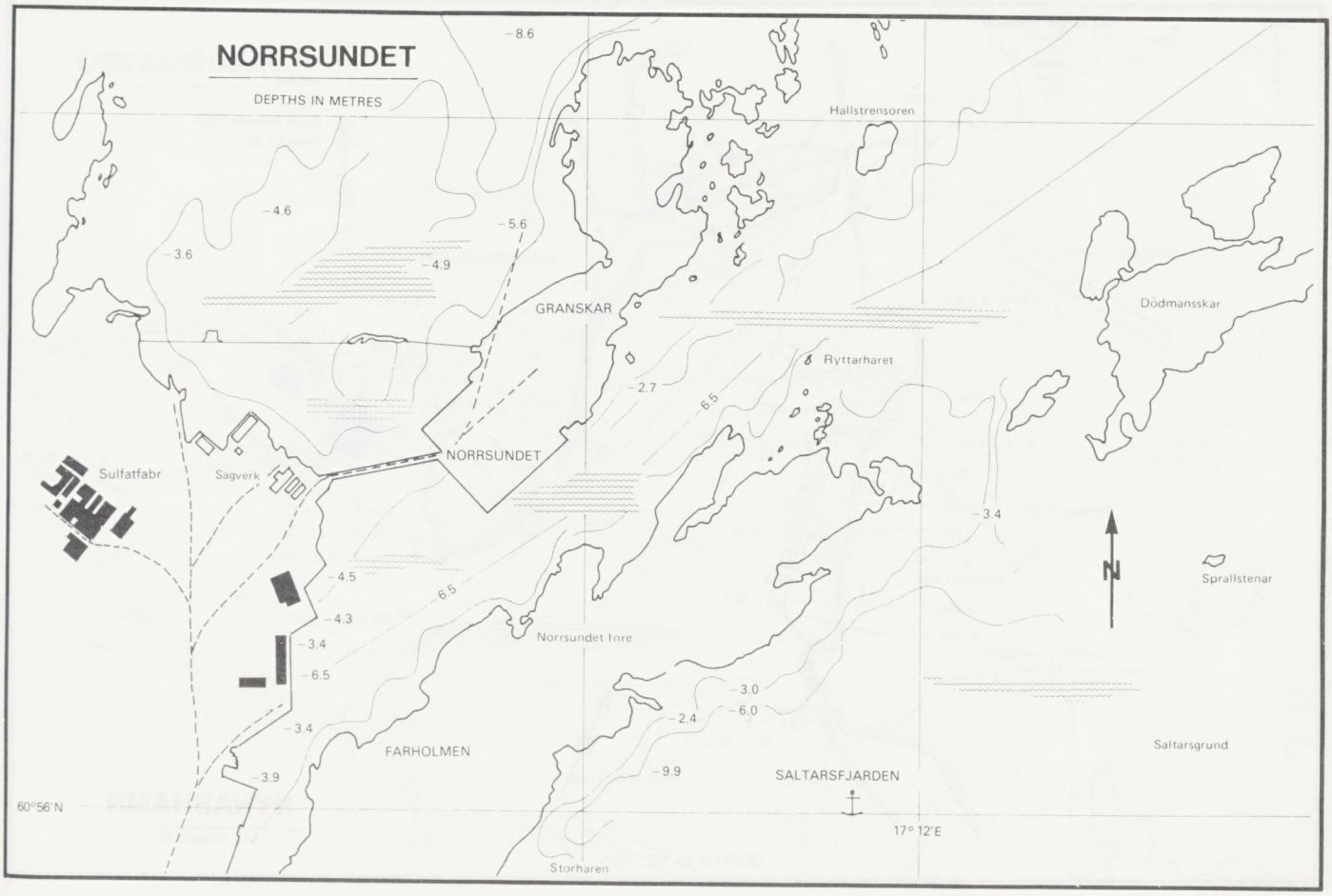

LYSEKIL
Fishing Harbour
Andersons Quay
5.5 m.
8.0 m.
10.0 m.
10.0 m.
Store Houses
Gullmarskajen
9.5 m.
9.5 m.
Industry
Reserve Area
7.0 m.
Grotokajen
6.0 m.
Refrigerated Storehouse
Store Houses
Local traffic
Future Harbour Area (under construction)
LYSEKIL

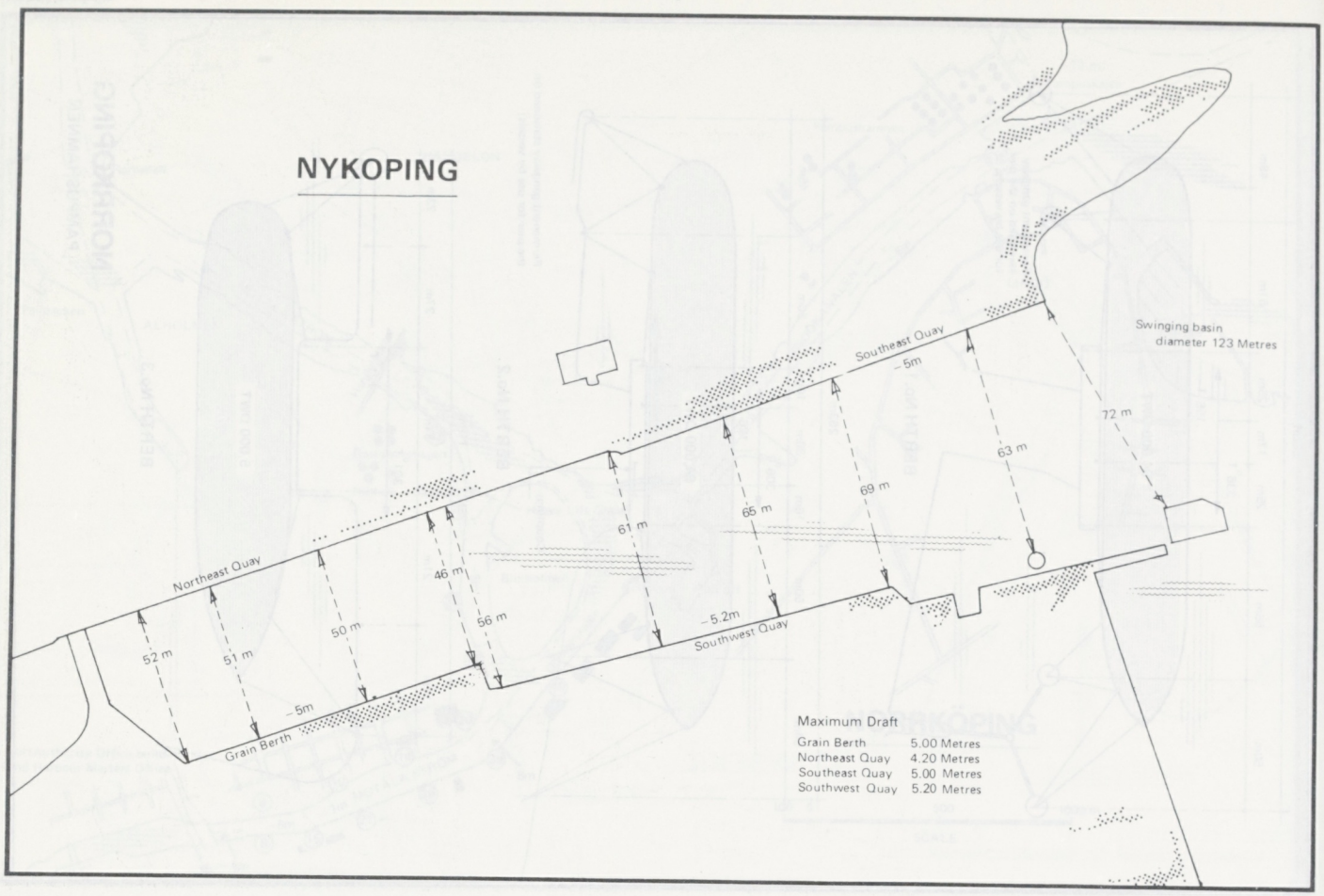

LIMHAMN
10.5 m.
10.5 m.
8.6 m.
Oil Harbour
8.4 m.
Central Harbour
8.4 m.
5.0 m.
Ferry Harbour
Leading Lights
Oil Harbour
11.0 m.
1010
1009
1008
1007
1006
6.0 m.
1003
1004
9.0 m.
Leading Lights
9.0 m.
9.0 m.
3.5 m.
801
9.0 m.
Nordkajen
Industrial Harbour Basin 2
7.2 m.
901
Sydkajen 905
Leading Lights
3.1 m.
6.0 m.
Norra Varvsbassangen
25
Kockums Shipyard
9.2 m.
Container Terminal
9.2 m.
Free Port
610
600
7.5 m.
520
604
Hullkajen
7.2 m.
Inner Harbour
7.2 m.
505
New Harbour
Stockholmskajen
Ro-Ro
29
Jarnkajen
9.0 m.
Basin 1
815
Kolkajen
810
MALMO
Hjalmarekajen
6.0 m.
Skeppsbron
Customs
Pilots
7.2 m.
(305)
404
Port Administration
Marshalling Yard

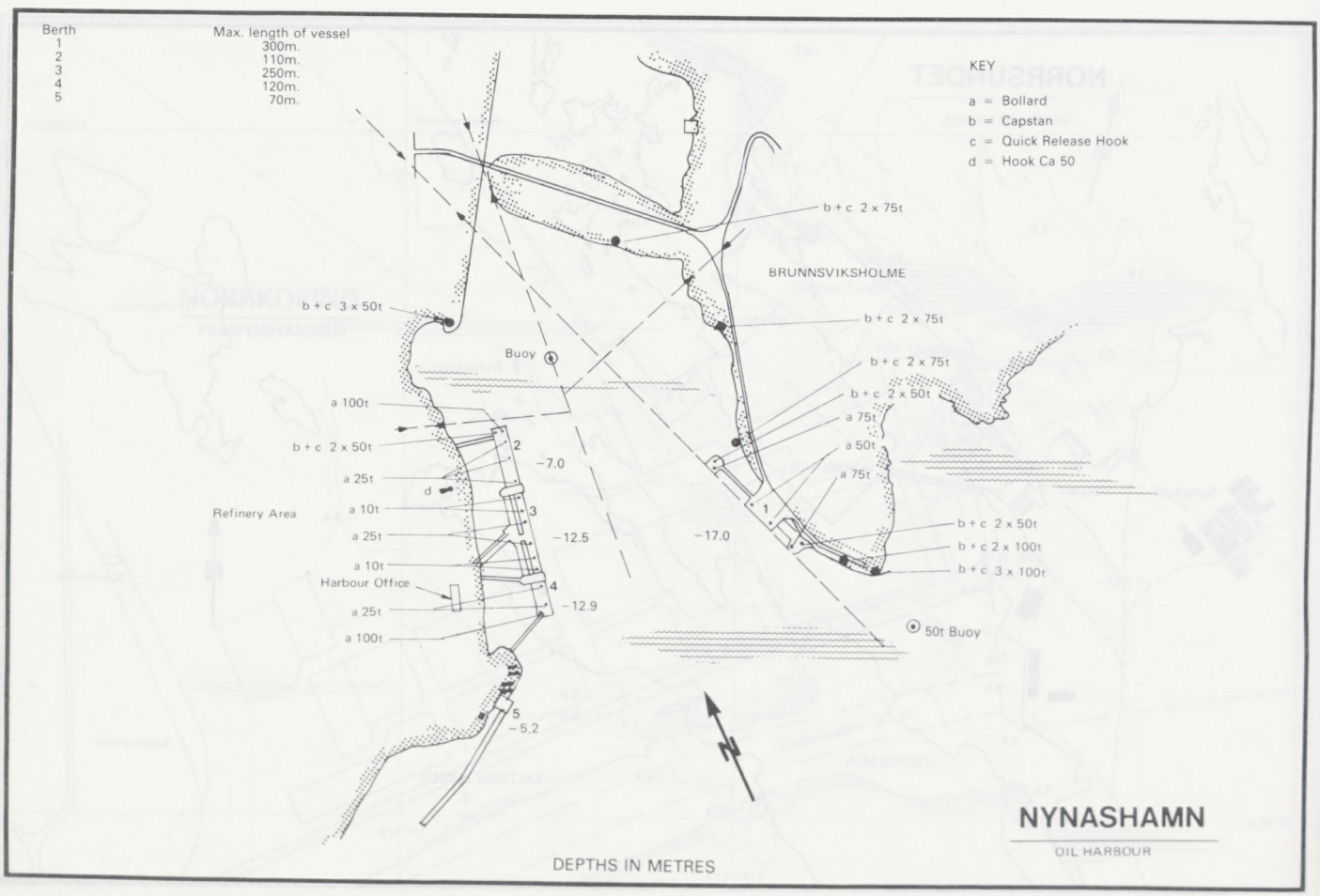

HANDELON
Ramshall
−5m
−9m
MOTALA STRÖM
Tallbacken
ALHOLMEN
Hamngatsbron
−7m
Gastgivarehagen
42
Roll-on – Roll-off
38
Heavy Lift Crane
−9m
−4m
−5m
Blixholmen
32
Roll on – Roll off
Oljemansk.
26
49
20
14
10
39
−8m
29
6
−7m
21
−6m
9
15
−5m
Port Authority Office building and Harbour Masters Office
Pampushamnen
−12 m.
Pampuskajen
−9.5m
−6m
LINDOKANALEN
LINDO
Marina
N
NORRKÖPING
100 0 500 1000 m
SCALE

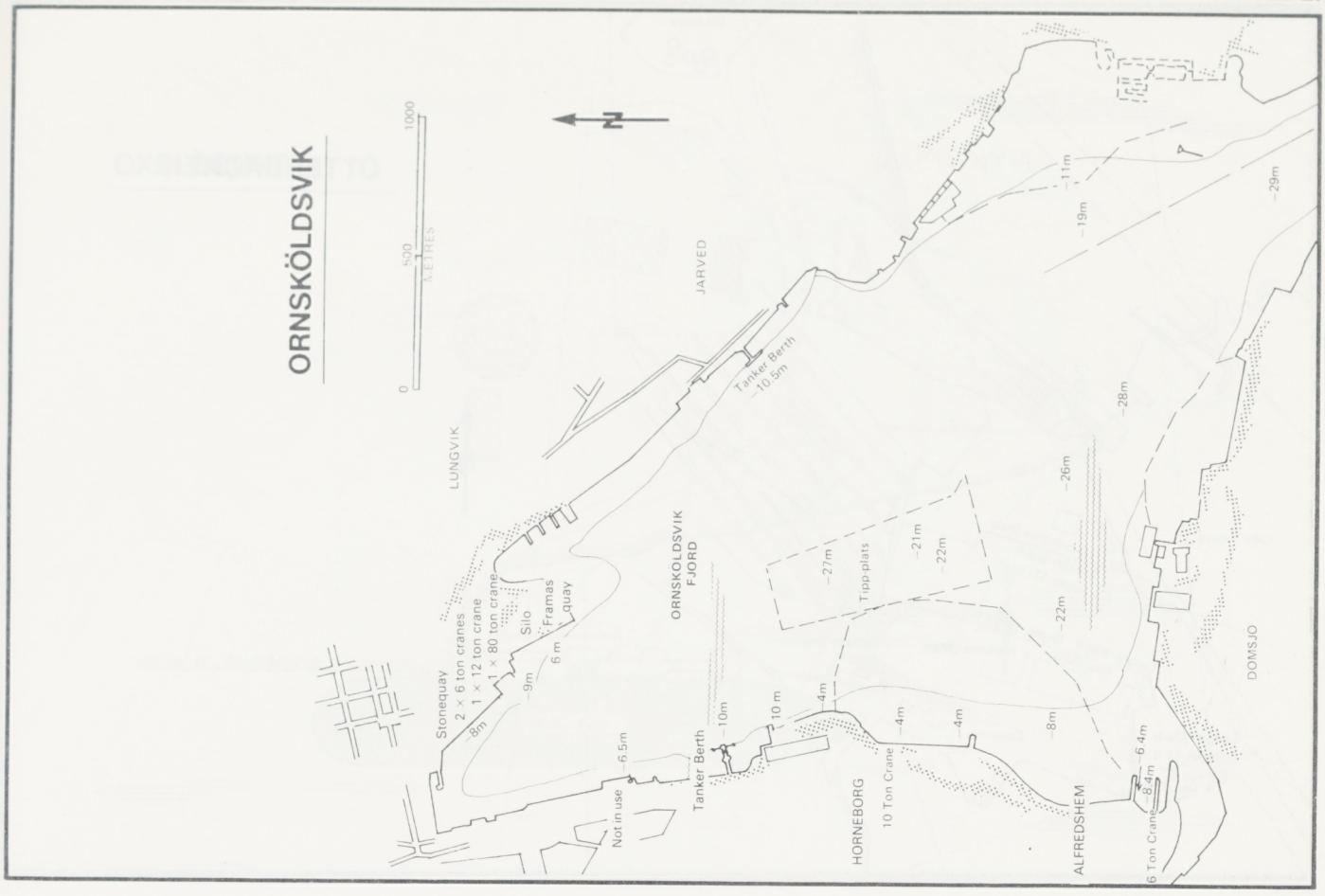

Handelon
NORRKOPING
PAMPUSHAMNEN
−6.0 m.
280 m.
Pampuskajen
General Cargo
Bulk Cargo
Oil Jetty
Pier 2
−7.5 m.
Oil Jetty
Pier 3
Oil Jetty
Pier 1
−12.0 m.
Lindokanalen −9.5 m.
N

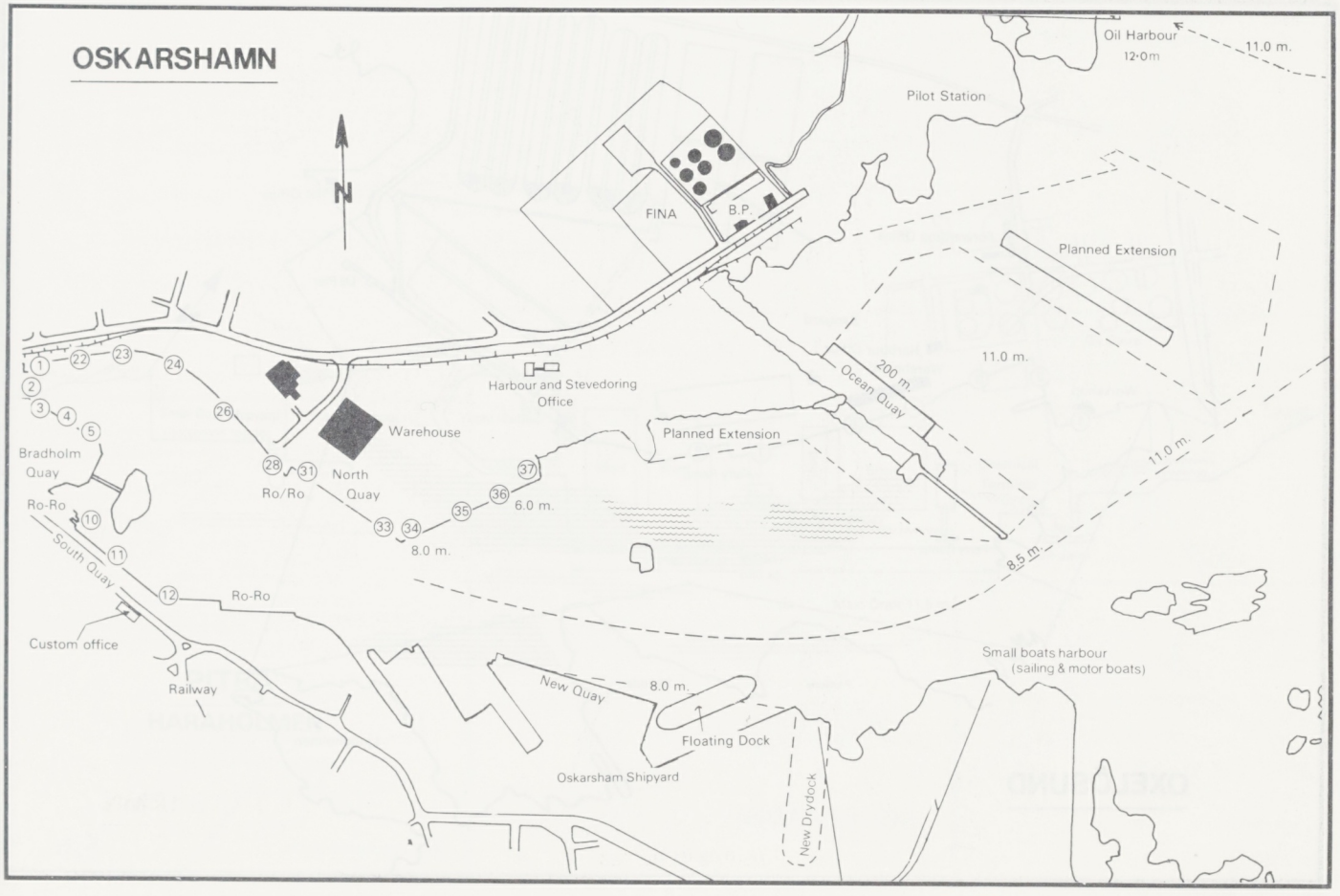

NORRKOPING
PAMPUSHAMNEN
BERTH No.1
64,000 DWT
Permanent gangway stationed on the pier for use by vessels.
272m
48m
51m
25m
17m
25m
56m
50m
156° T
336° T
BERTH No.2
64,000 DWT
Permanent gangway stationed on the pier for use by vessels:
Couplings
263m
45m
50m
16m
30m
16m
50m
54m
126° T
306° T
BERTH No.3
5,000 DWT
119m
23m
27m
31m
21m
17m
121° T
301° T

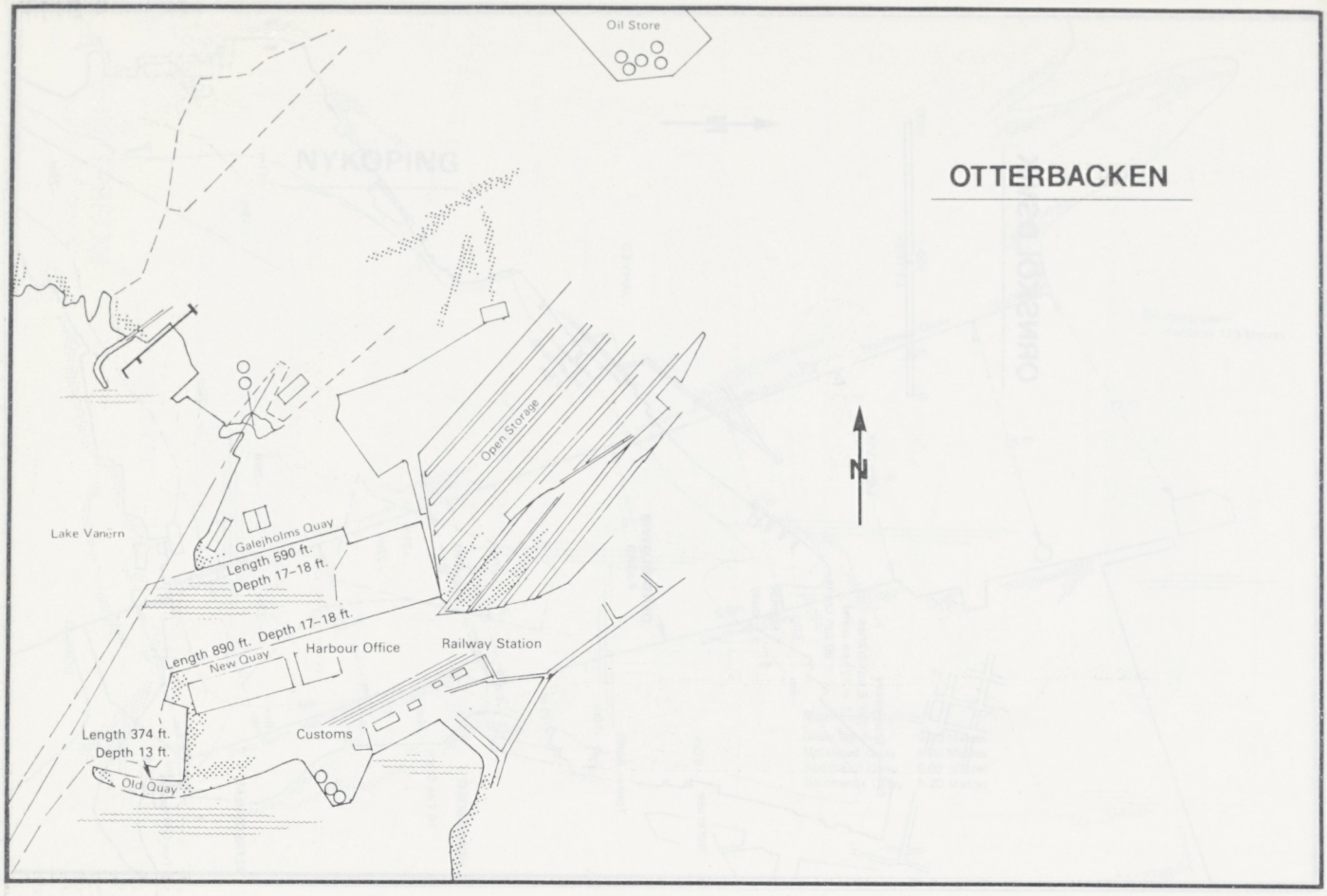

NORRSUNDET
DEPTHS IN METRES
Hallstrensoren
GRANSKAR
Ryttarharet
Dödmansskar
NORRSUNDET
Sulfatfabr
Sagverk
Norrsundet Inre
Sprallstenar
FARHOLMEN
SALTARSFJARDEN
Saltarsgrund
Storharen
60°56'N
17° 12'E
N
-8.6
-4.6
-5.6
-3.6
-4.9
-2.7
-6.5
-3.4
-4.5
-4.3
-3.4
-6.5
-3.4
-3.9
-3.0
-6.0
-2.4
-9.9

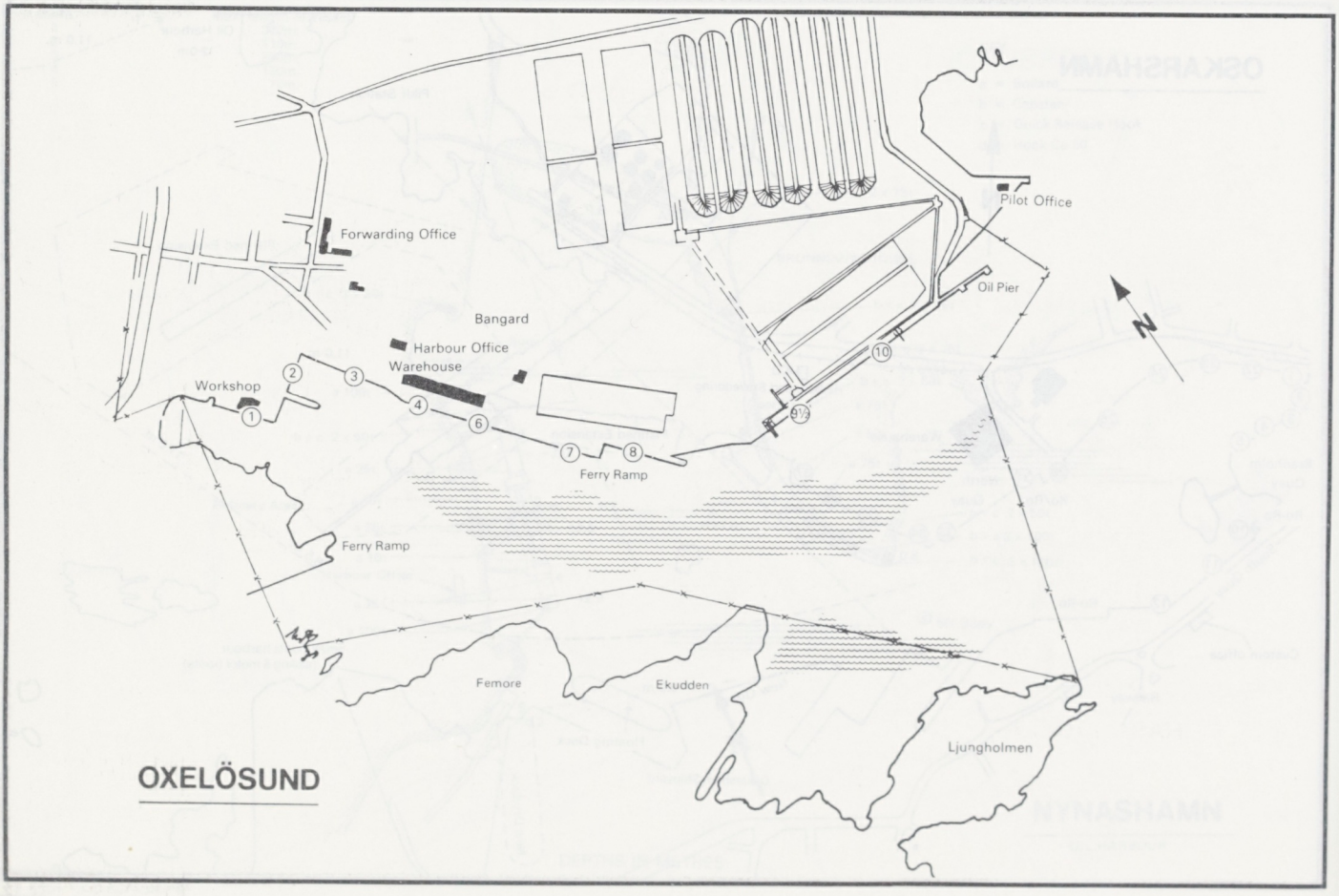

NYKOPING
Swinging basin
diameter 123 Metres
Southeast Quay
– 5m
72 m
63 m
69 m
65 m
61 m
46 m
56 m
50 m
51 m
52 m
Northeast Quay
– 5m
Grain Berth
– 5.2m
Southwest Quay
Maximum Draft
Grain Berth 5.00 Metres
Northeast Quay 4.20 Metres
Southeast Quay 5.00 Metres
Southwest Quay 5.20 Metres


Berth
Max. length of vessel
1 300m.
2 110m.
3 250m.
4 120m.
5 70m.
KEY
a = Bollard
b = Capstan
c = Quick Release Hook
d = Hook Ca 50
b + c 2 x 75t
BRUNNSVIKSHOLME
b + c 3 x 50t
b + c 2 x 75t
Buoy
b + c 2 x 75t
b + c 2 x 50t
a 75t
a 100t
a 50t
b + c 2 x 50t
2
–7.0
a 25t
a 75t
d
Refinery Area
a 10t
3
1
a 25t
–12.5
–17.0
b + c 2 x 50t
a 10t
b + c 2 x 100t
Harbour Office
4
b + c 3 x 100t
a 25t
–12.9
50t Buoy
a 100t
5
–5.2
NYNASHAMN
OIL HARBOUR
DEPTHS IN METRES

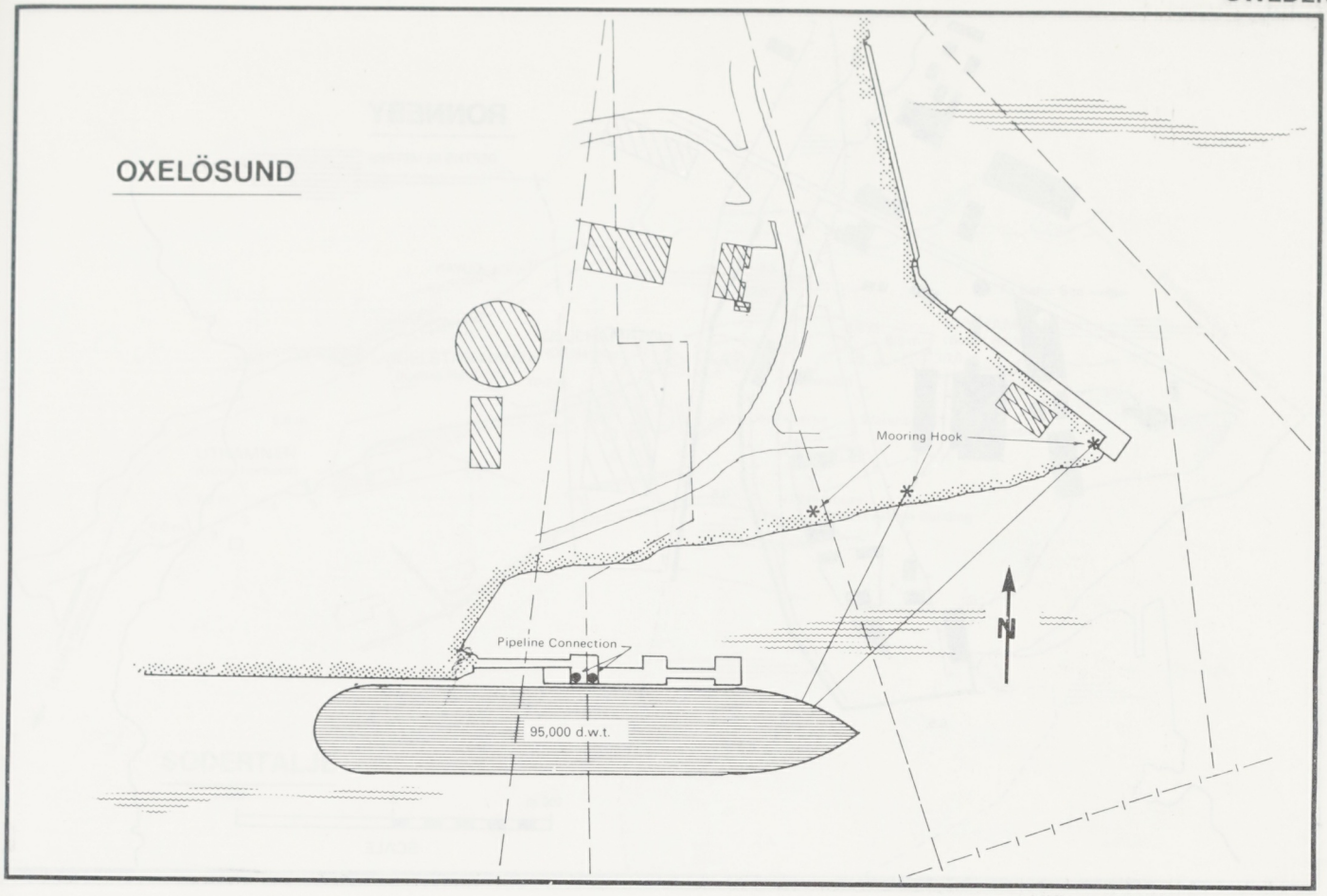

ORNSKÖLDSVIK
N
1000
500
0
METRES
JARVED
LUNGVIK
ORNSKOLDSVIK FJORD
Tanker Berth 10.5m
Stonequay 2 × 6 ton cranes 1 × 12 ton crane 1 × 80 ton crane
Silo
Framas quay
6 m
-9m
-8m
Not in use
-6.5m
Tanker Berth
-10m
10 m
-4m
HORNEBORG
10 Ton Crane
-4m
-4m
-8m
ALFREDSHEM
6 Ton Crane
-8.4m
-6.4m
-27m
Tipp-plats
-21m
-22m
-26m
-22m
-28m
-11m
-19m
-29m
DOMSJO

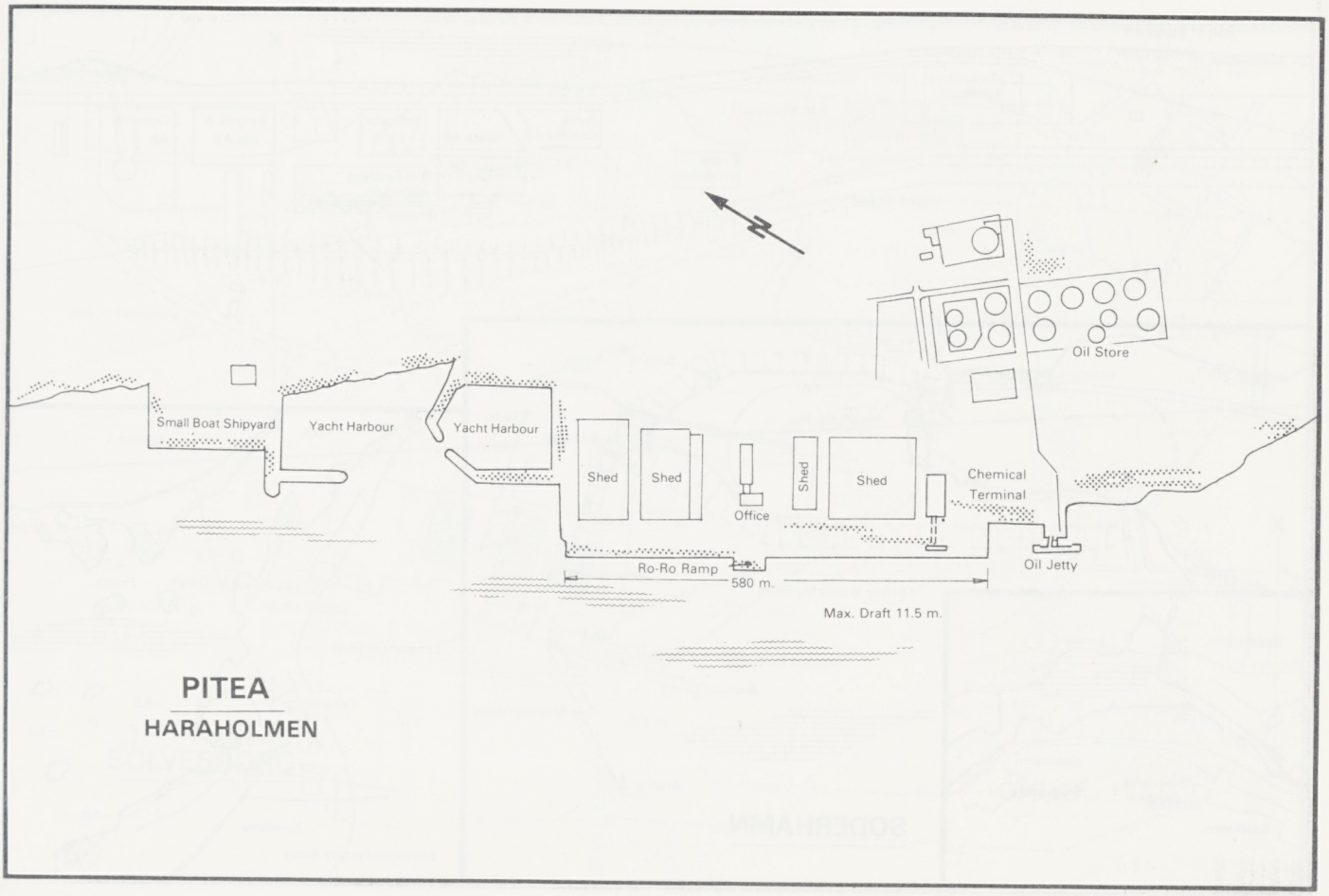

OSKARSHAMN
N
Oil Harbour
12·0m
11.0 m.
Pilot Station
FINA
B.P.
Planned Extension
11.0 m.
200 m.
Ocean Quay
Harbour and Stevedoring Office
Warehouse
Planned Extension
11.0 m.
Bradholm Quay
Ro-Ro
South Quay
Ro/Ro
North Quay
6.0 m.
8.0 m.
8.5 m.
Ro-Ro
Custom office
Railway
Small boats harbour (sailing & motor boats)
New Quay
8.0 m.
Floating Dock
Oskarsham Shipyard
New Drydock


Oil Store
OTTERBACKEN
Open Storage
N
Lake Vanern
Galejholms Quay
Length 590 ft.
Depth 17–18 ft.
Length 890 ft. Depth 17–18 ft.
New Quay
Harbour Office
Railway Station
Length 374 ft.
Depth 13 ft.
Old Quay
Customs

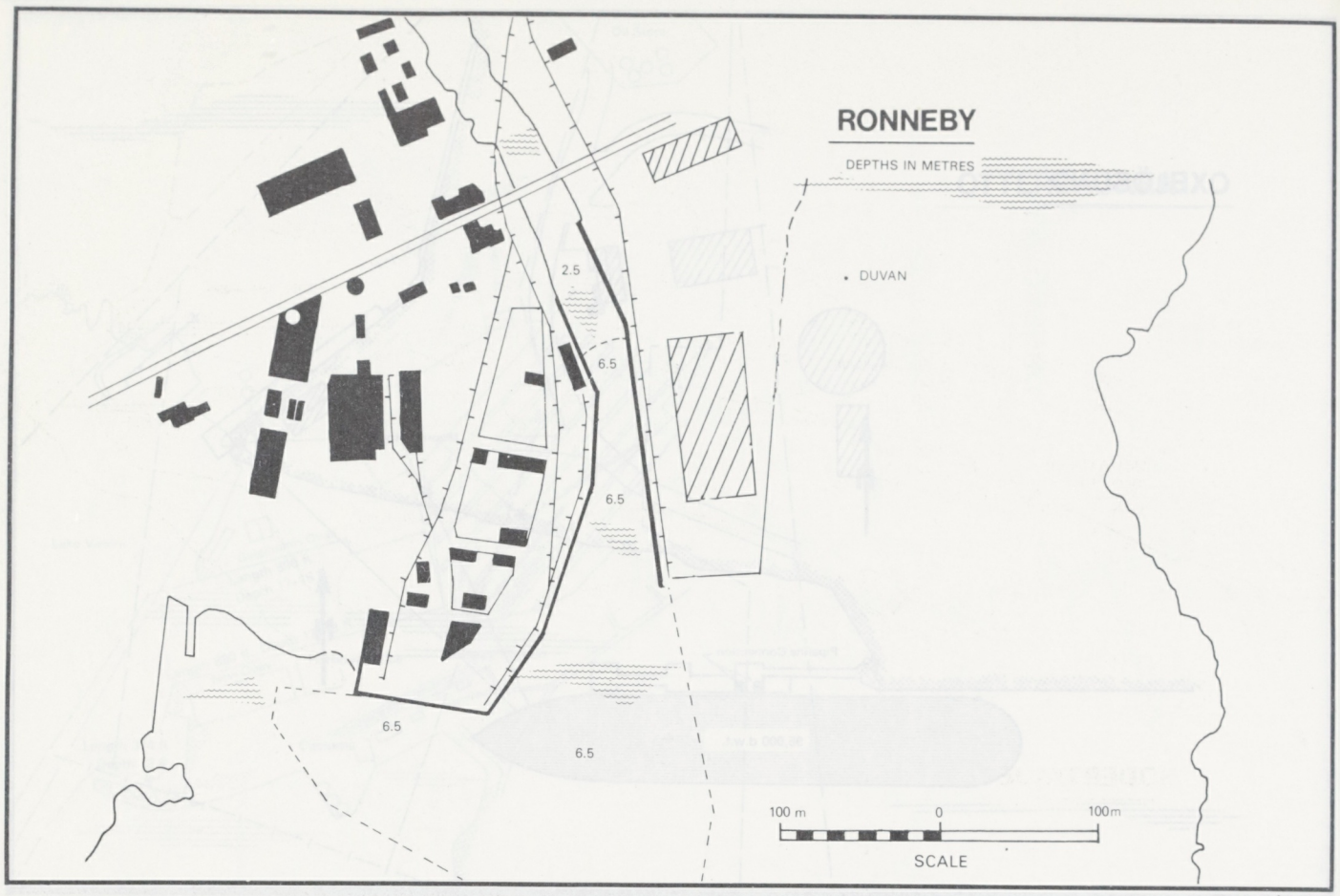

Pilot Office
Forwarding Office
Oil Pier
N
Bangard
Harbour Office
Warehouse
Workshop
1
2
3
4
6
7
8
9½
10
Ferry Ramp
Ferry Ramp
Femore
Ekudden
Ljungholmen
OXELÖSUND

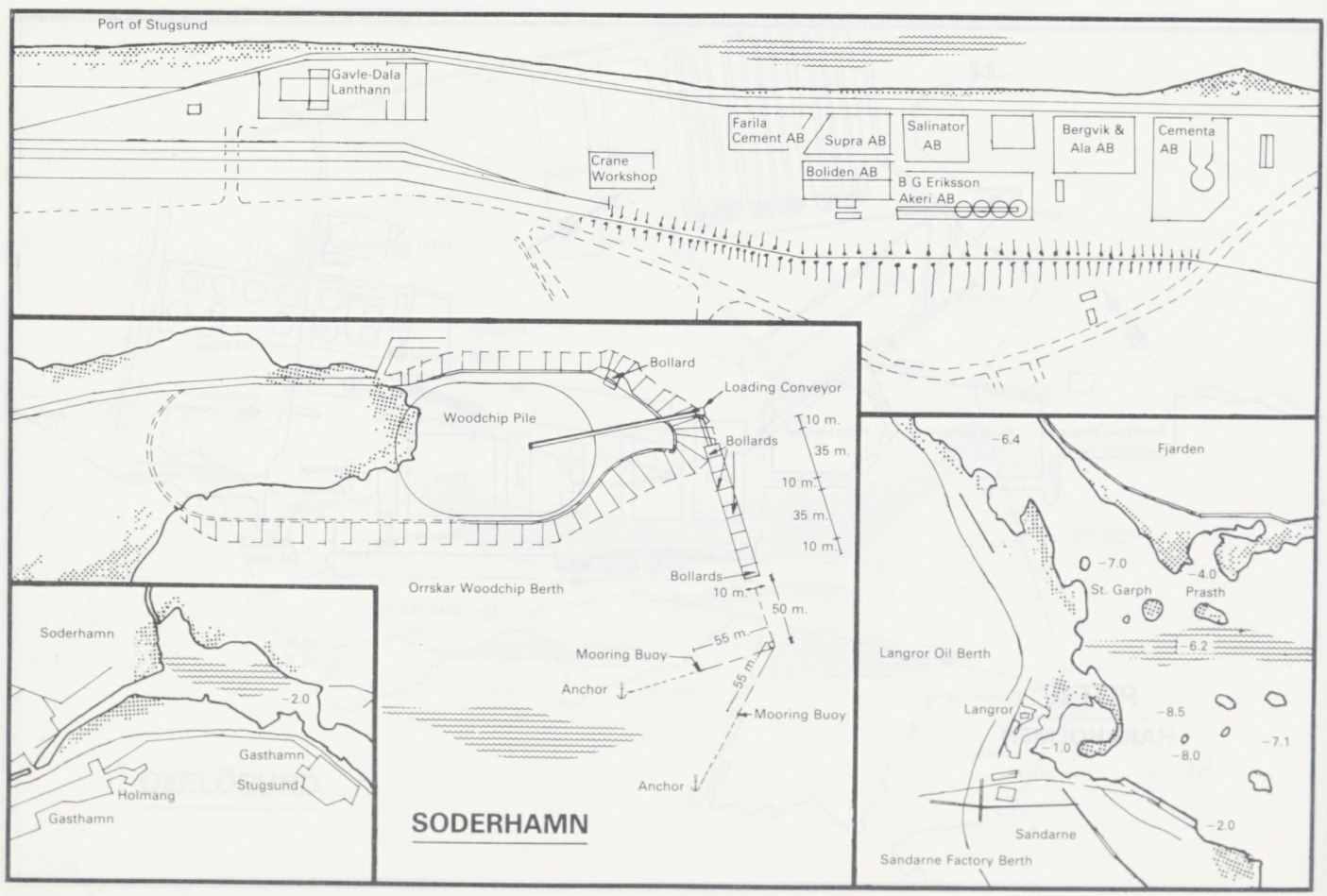
OXELÖSUND

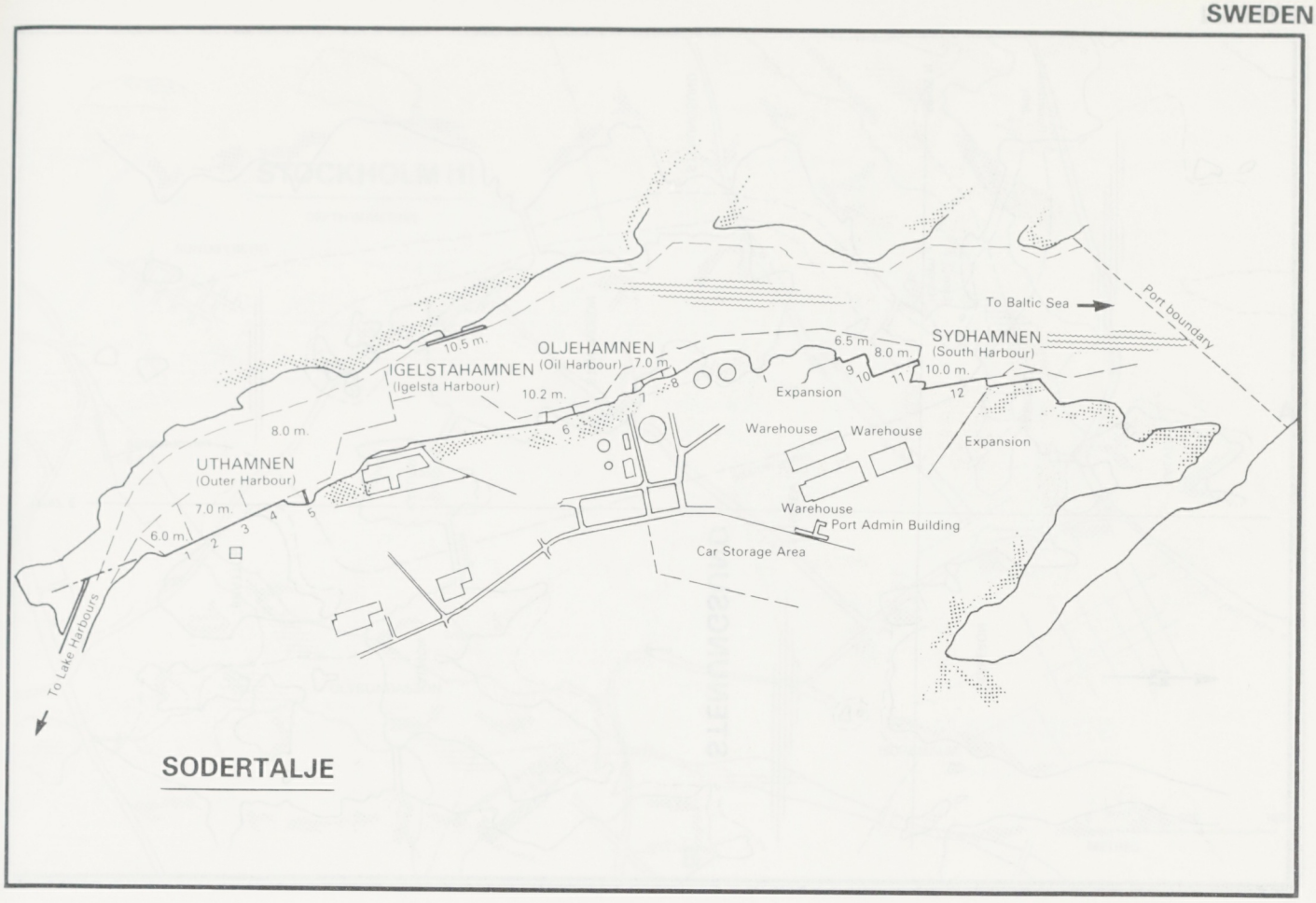




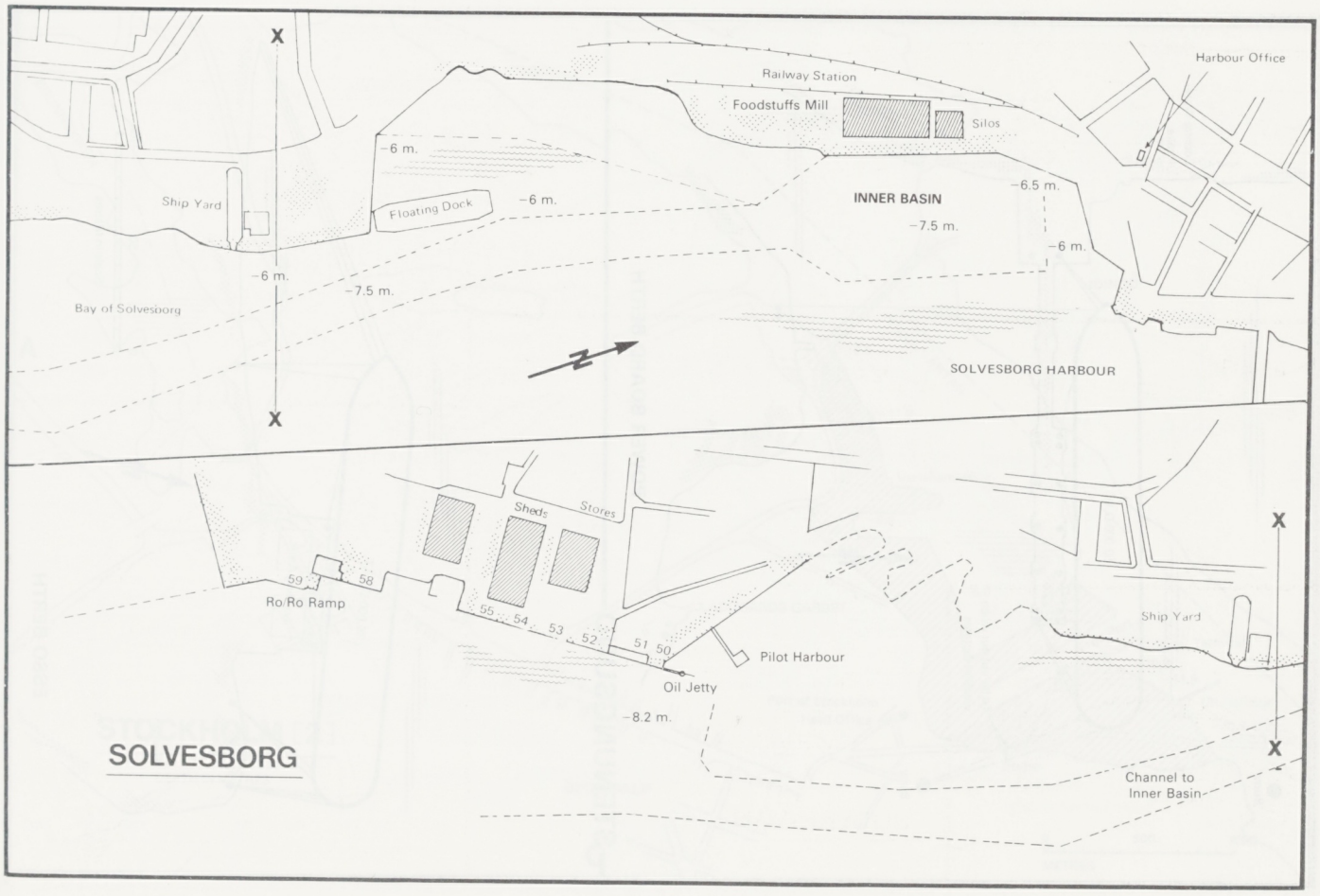
PITEA
HARAHOLMEN


RONNEBY
DEPTHS IN METRES
DUVAN
2.5
6.5
6.5
6.5
6.5
100 m
0
100m
SCALE

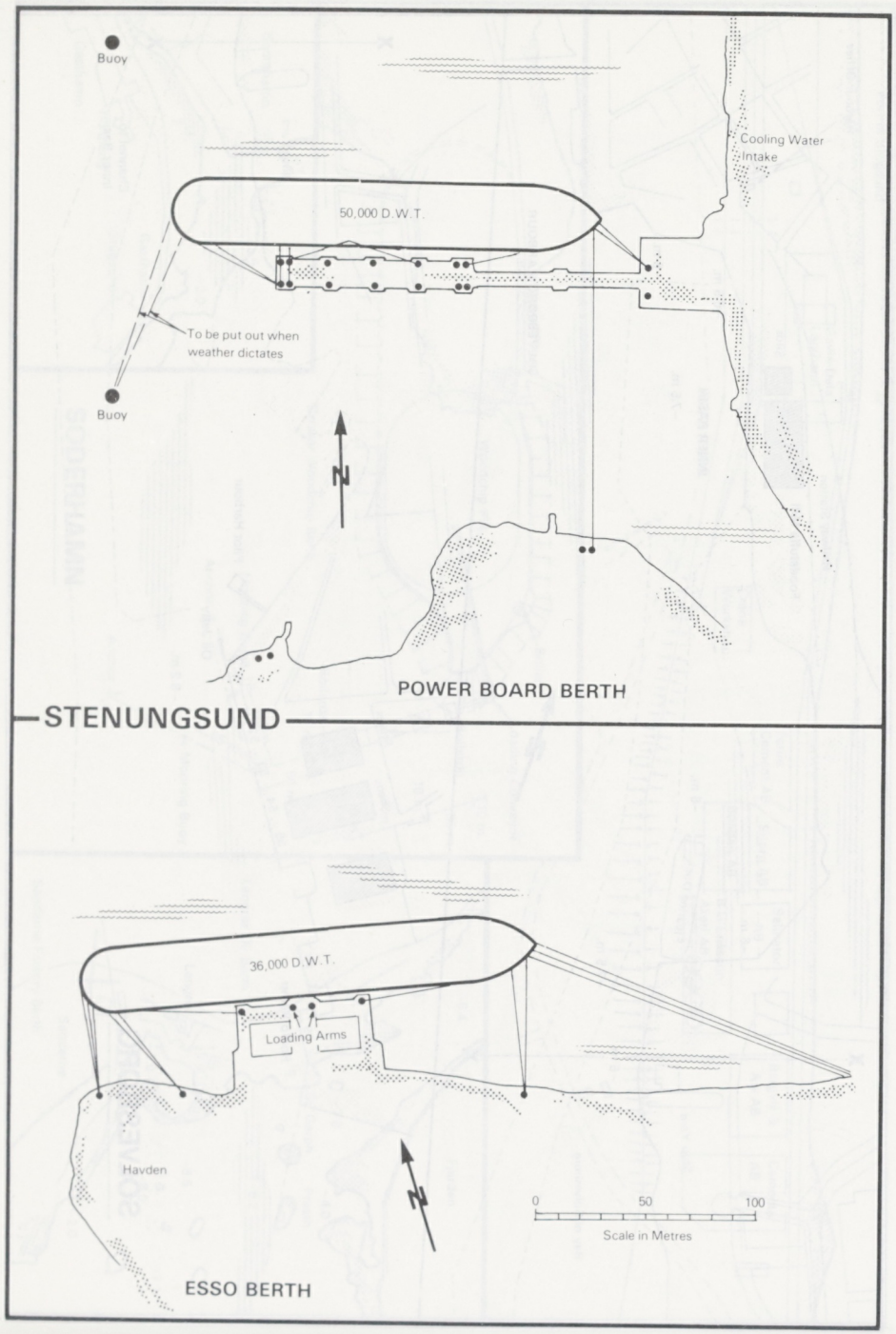

Port of Stugsund
Gavle-Dala Lanthann
Crane Workshop
Farila Cement AB
Supra AB
Salinator AB
Boliden AB
B G Eriksson Akeri AB
Bergvik & Ala AB
Cementa AB
Bollard
Loading Conveyor
Woodchip Pile
Bollards
10 m.
35 m.
10 m.
35 m.
10 m.
Orrskar Woodchip Berth
Bollards
10 m.
50 m.
55 m.
Mooring Buoy
55 m.
Anchor
Mooring Buoy
Anchor
SODERHAMN
Soderhamn
-2.0
Gasthamn
Holmang
Stugsund
Gasthamn
-6.4
Fjarden
-7.0
-4.0
St. Garph
Prasth
-6.2
Langror Oil Berth
Langror
-8.5
-7.1
-1.0
-8.0
-2.0
Sandarne
Sandarne Factory Berth

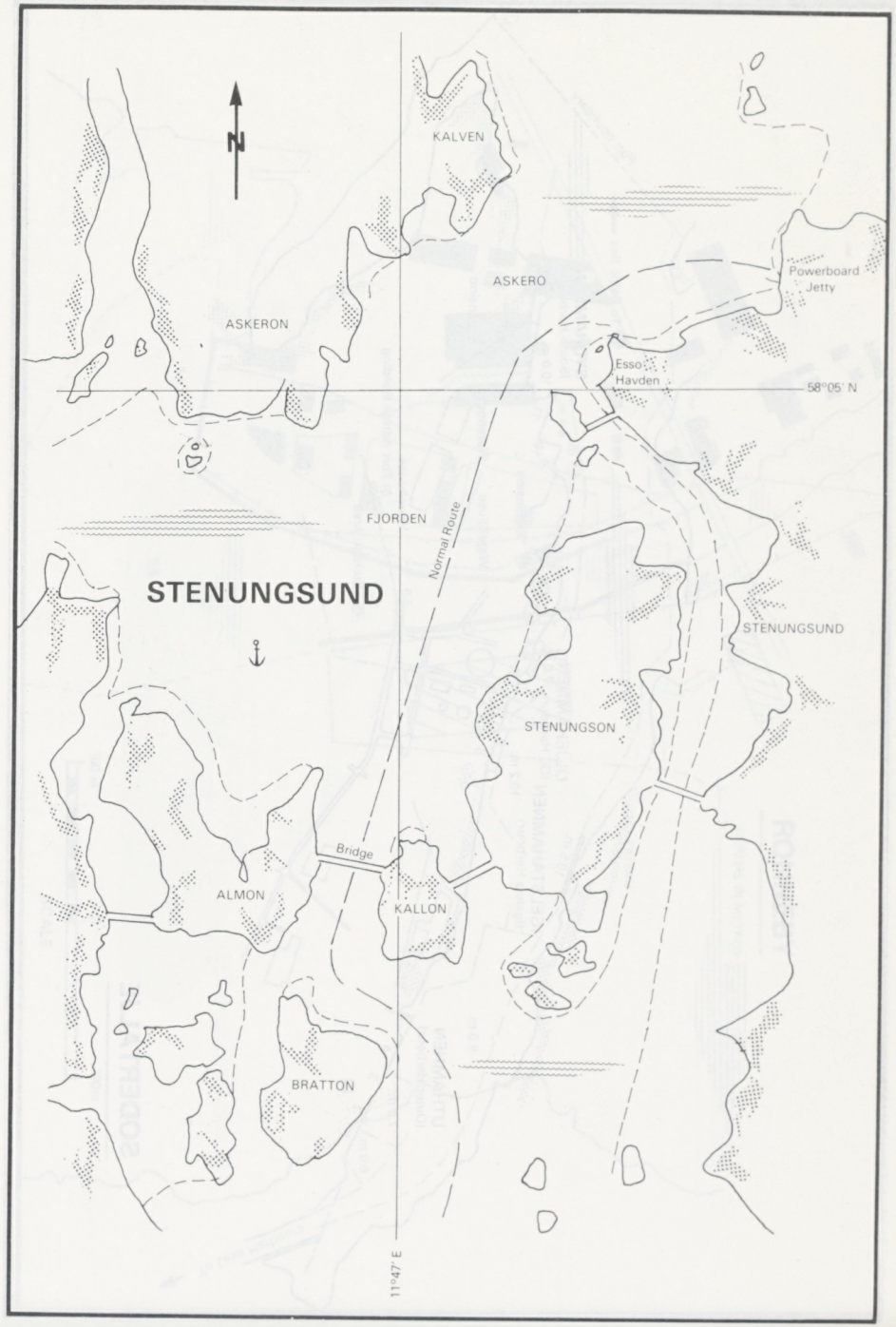


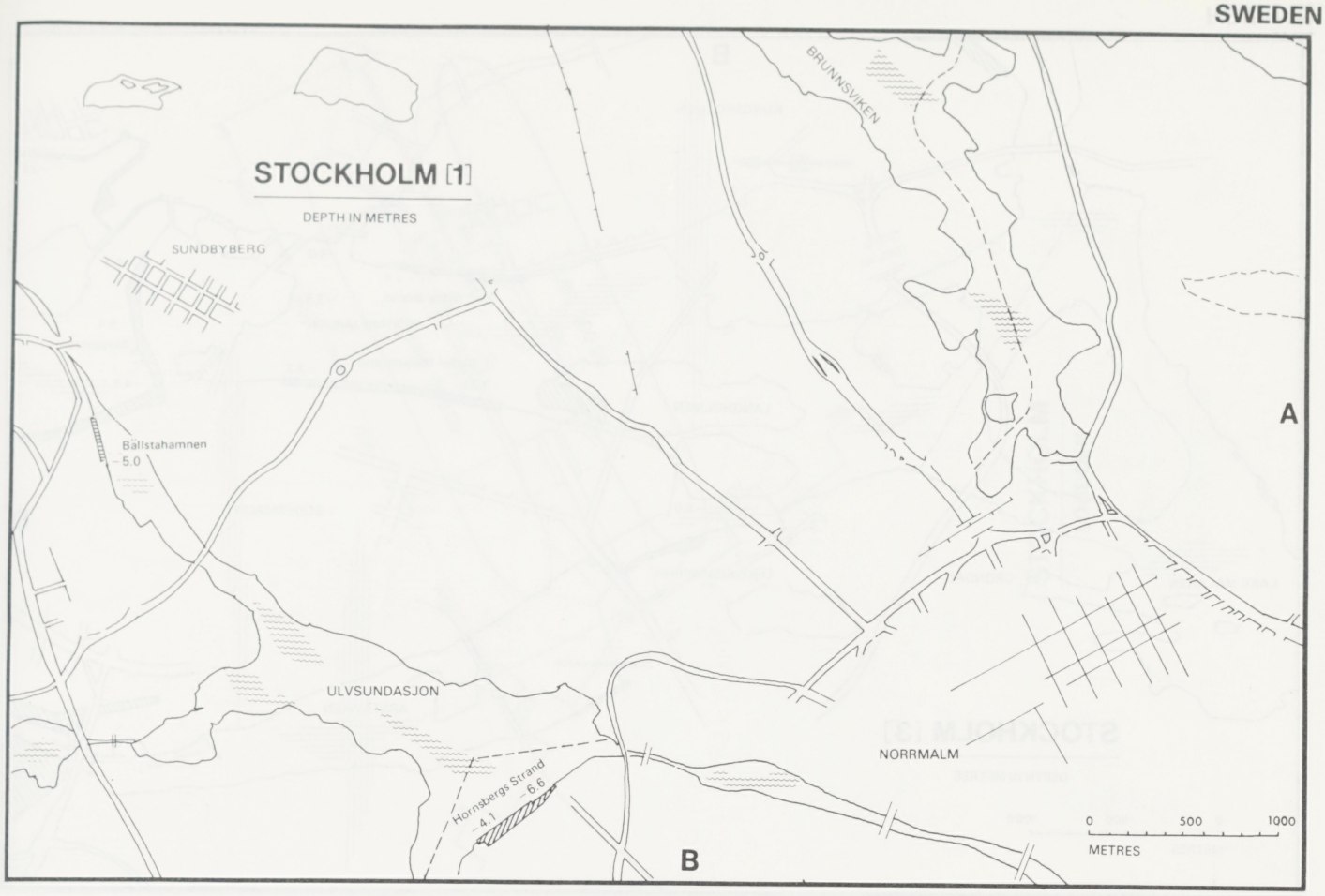
SODERTALJE

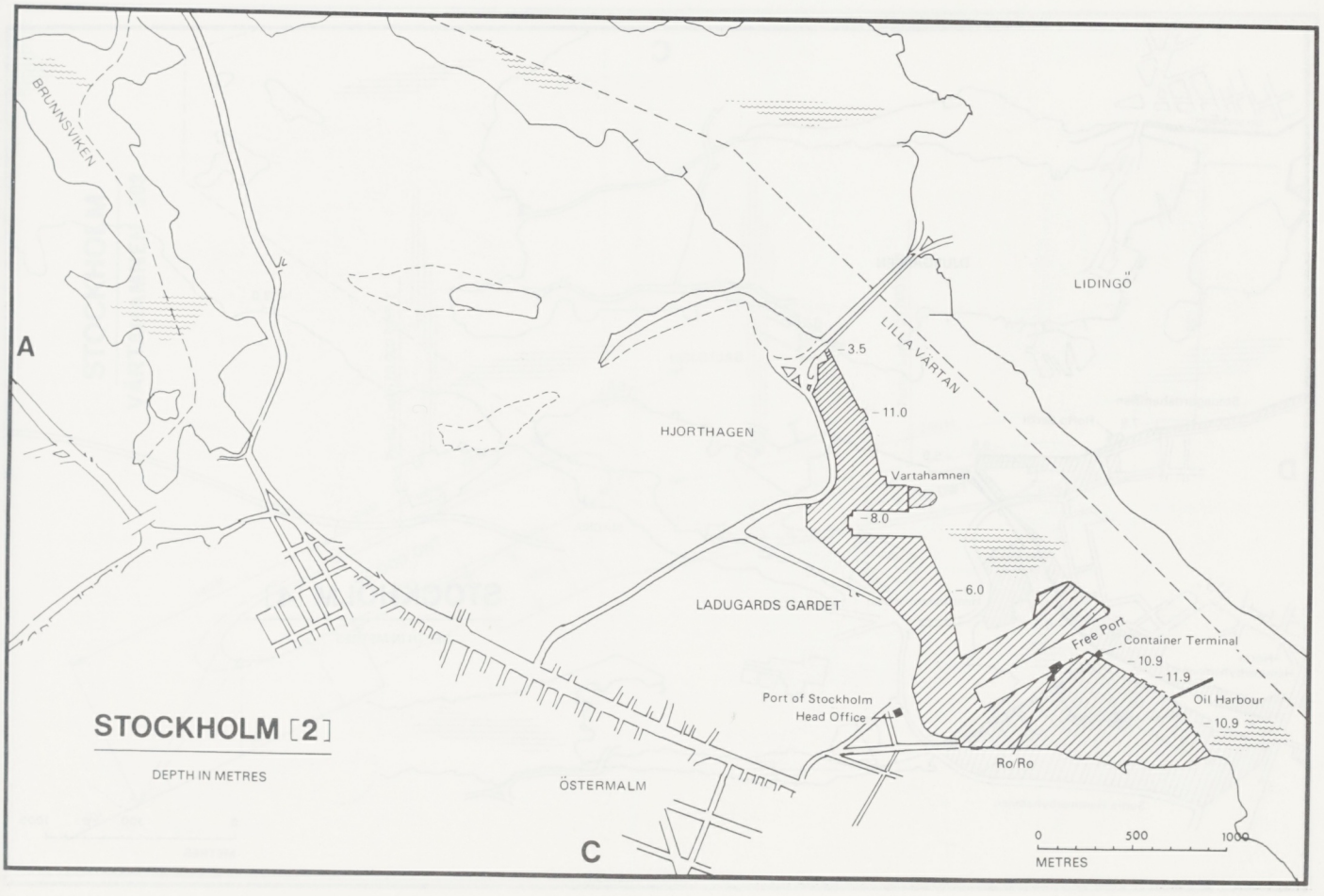


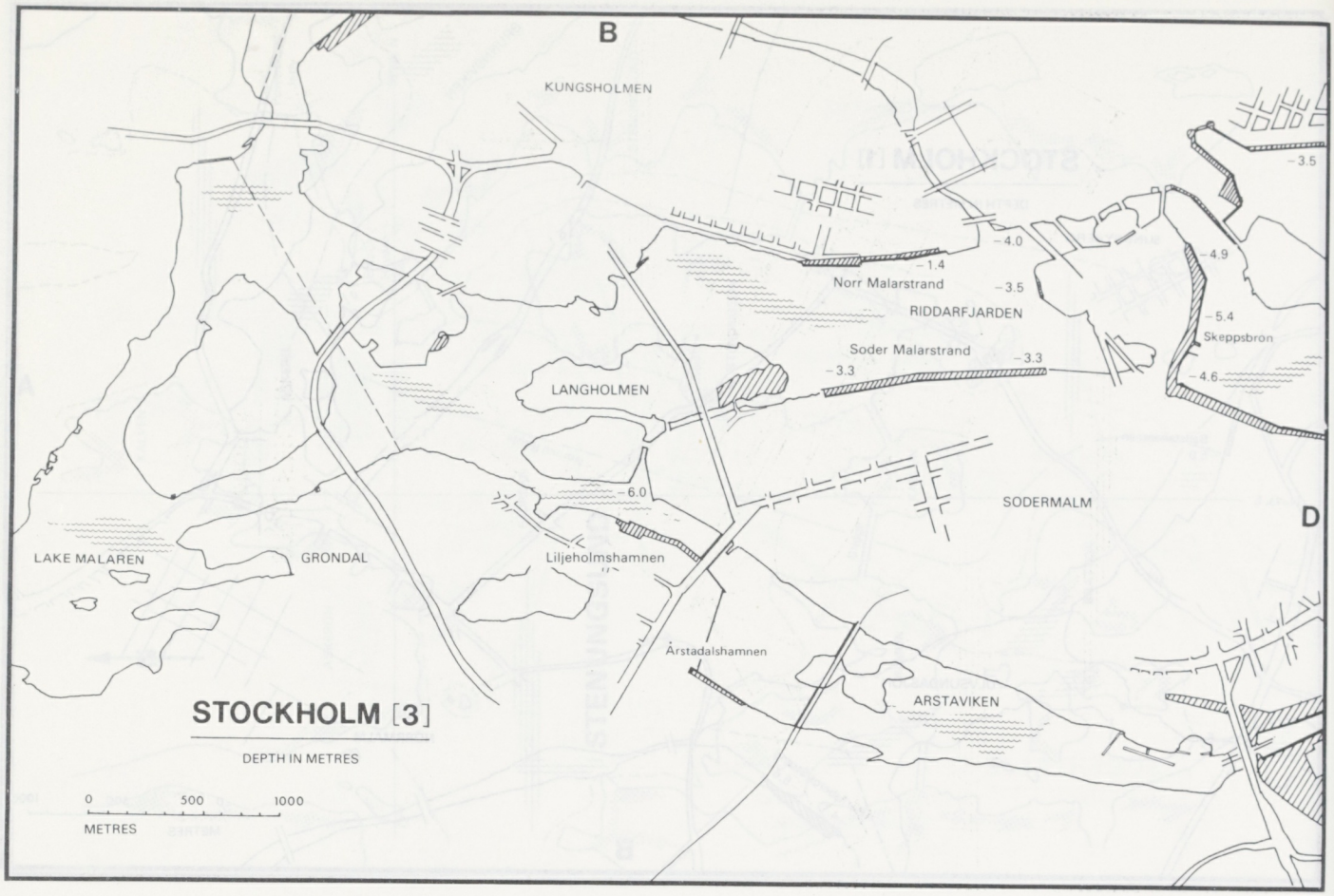
SOLVESBORG

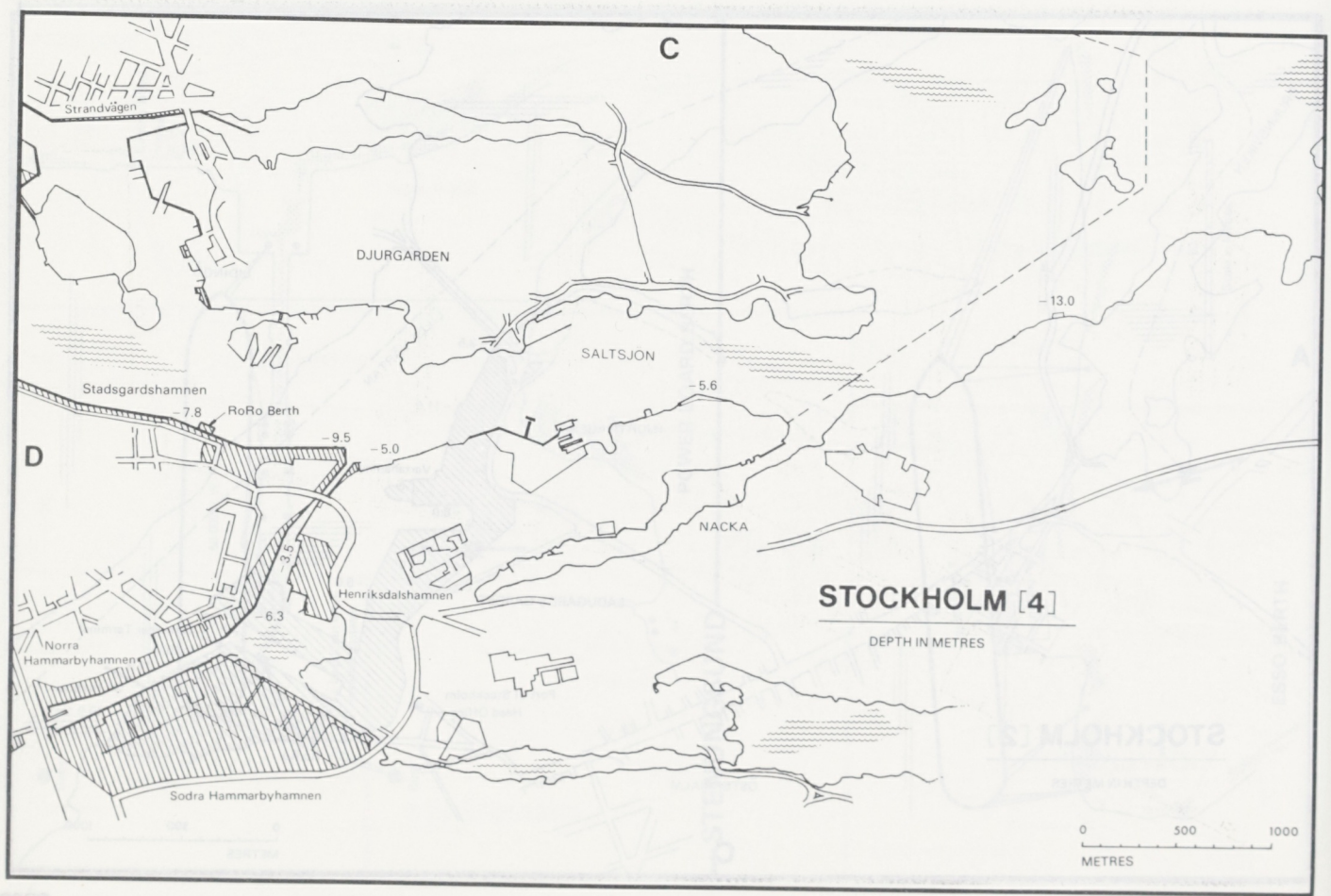

Buoy
Cooling Water Intake
50,000 D.W.T.
To be put out when weather dictates
Buoy
N
POWER BOARD BERTH
STENUNGSUND
36,000 D.W.T.
Loading Arms
Havden
N
0
50
100
Scale in Metres
ESSO BERTH

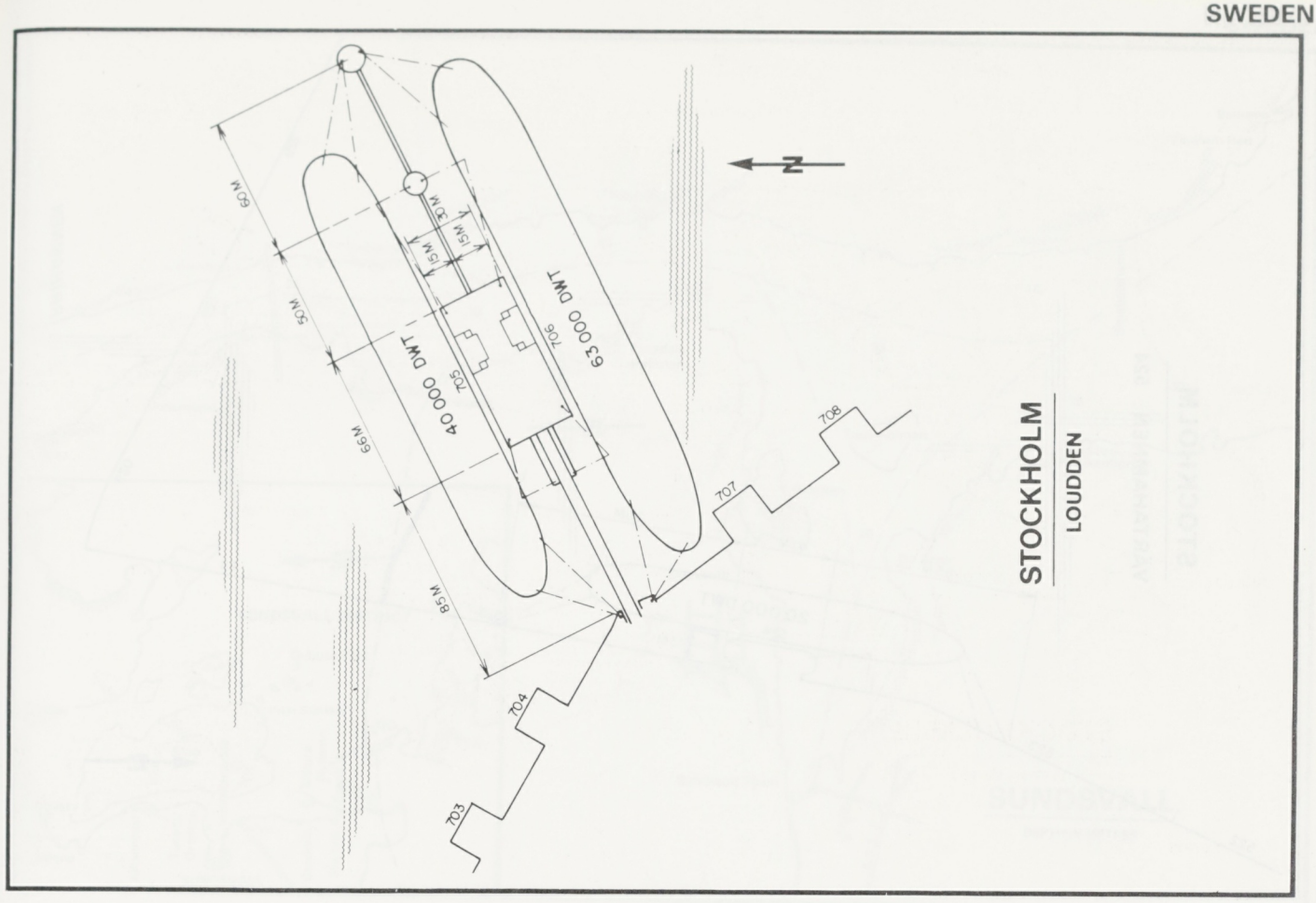

SWEDEN
N
KALVEN
ASKERO
Powerboard Jetty
ASKERON
Esso Havden
58°05' N
FJORDEN
Normal Route
STENUNGSUND
STENUNGSUND
STENUNGSON
Bridge
ALMON
KALLON
BRATTON
11°47' E

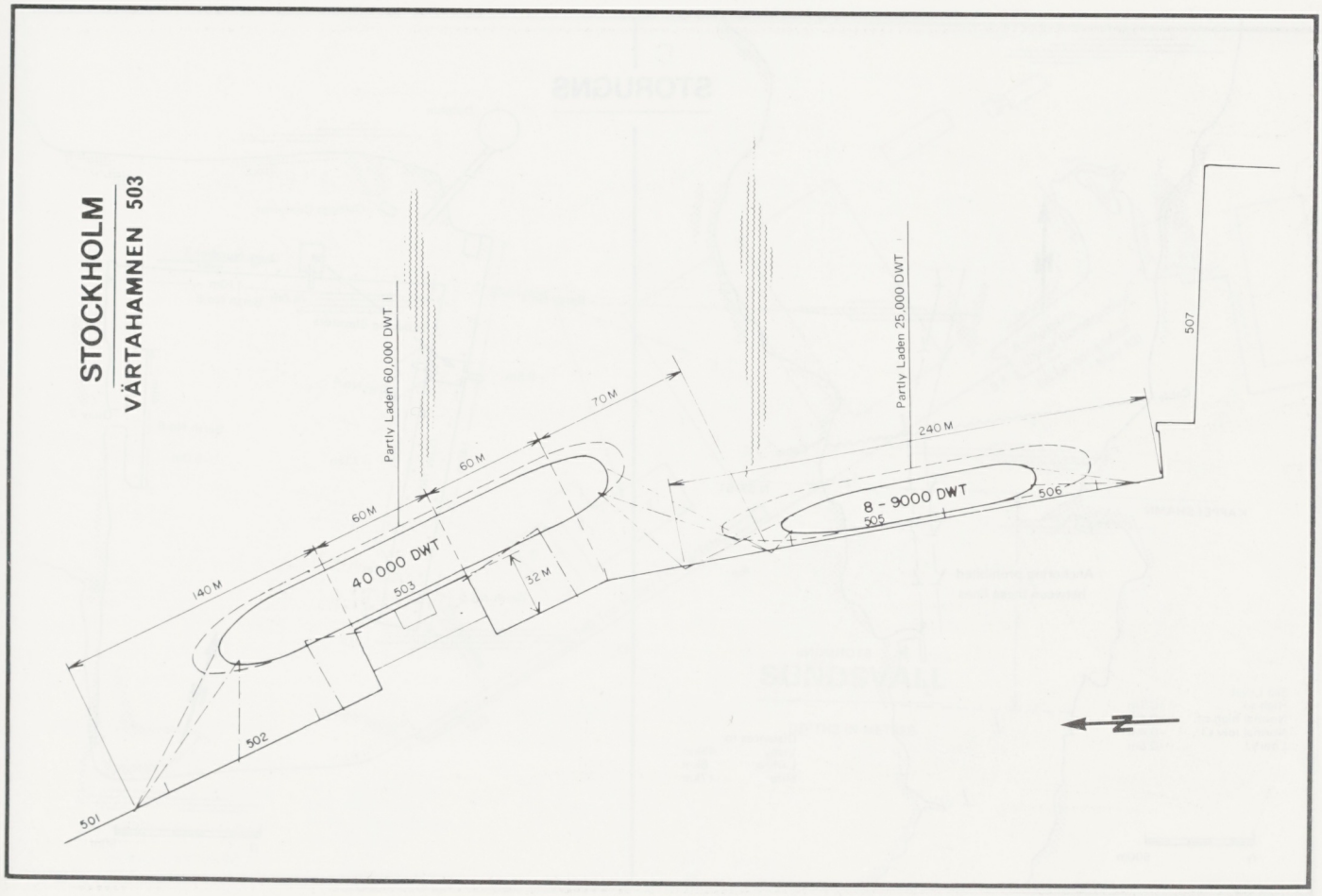

STOCKHOLM [1]
DEPTH IN METRES
BRUNNSVIKEN
SUNDBYBERG
Ballstahamnen
– 5.0
A
ULVSUNDASJON
Hornsbergs Strand
– 4.1
– 6.6
NORRMALM
B
0
500
1000
METRES

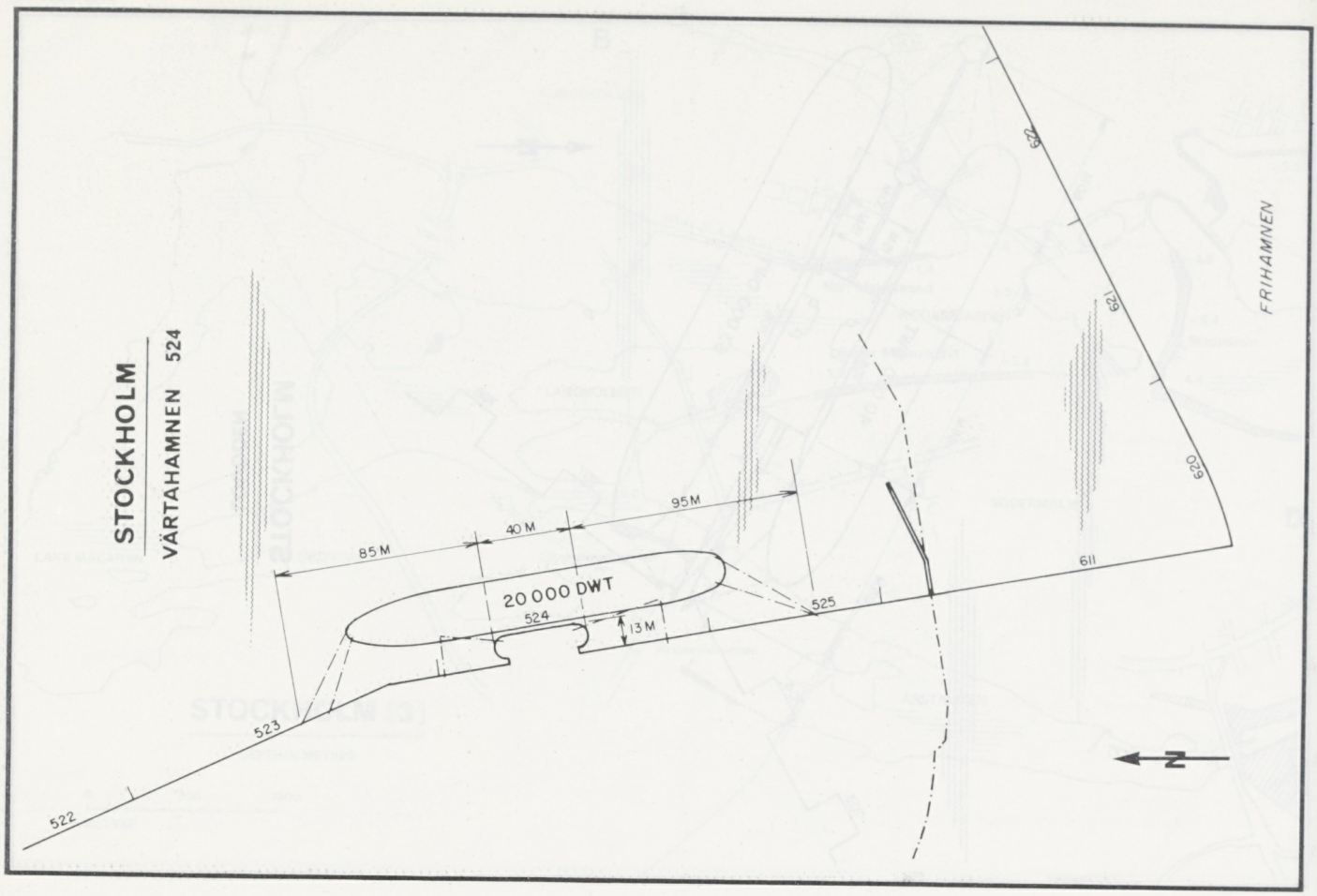

BRUNNSVIKEN
A
LIDINGÖ
LILLA VÄRTAN
– 3.5
– 11.0
HJORTHAGEN
Vartahamnen
– 8.0
– 6.0
LADUGARDS GARDET
Free Port
Container Terminal
– 10.9
– 11.9
Oil Harbour
– 10.9
Port of Stockholm
Head Office
Ro/Ro
STOCKHOLM [2]
DEPTH IN METRES
ÖSTERMALM
C
0
500
1000
METRES


B
KUNGSHOLMEN
-3.5
-4.0
-1.4
Norr Malarstrand
-3.5
RIDDARFJARDEN
-4.9
-5.4
Skeppsbron
Soder Malarstrand
-3.3
-3.3
-4.6
LANGHOLMEN
-6.0
SODERMALM
D
LAKE MALAREN
GRONDAL
Liljeholmshamnen
Årstadalshamnen
ARSTAVIKEN
STOCKHOLM [3]
DEPTH IN METRES
0
500
1000
METRES

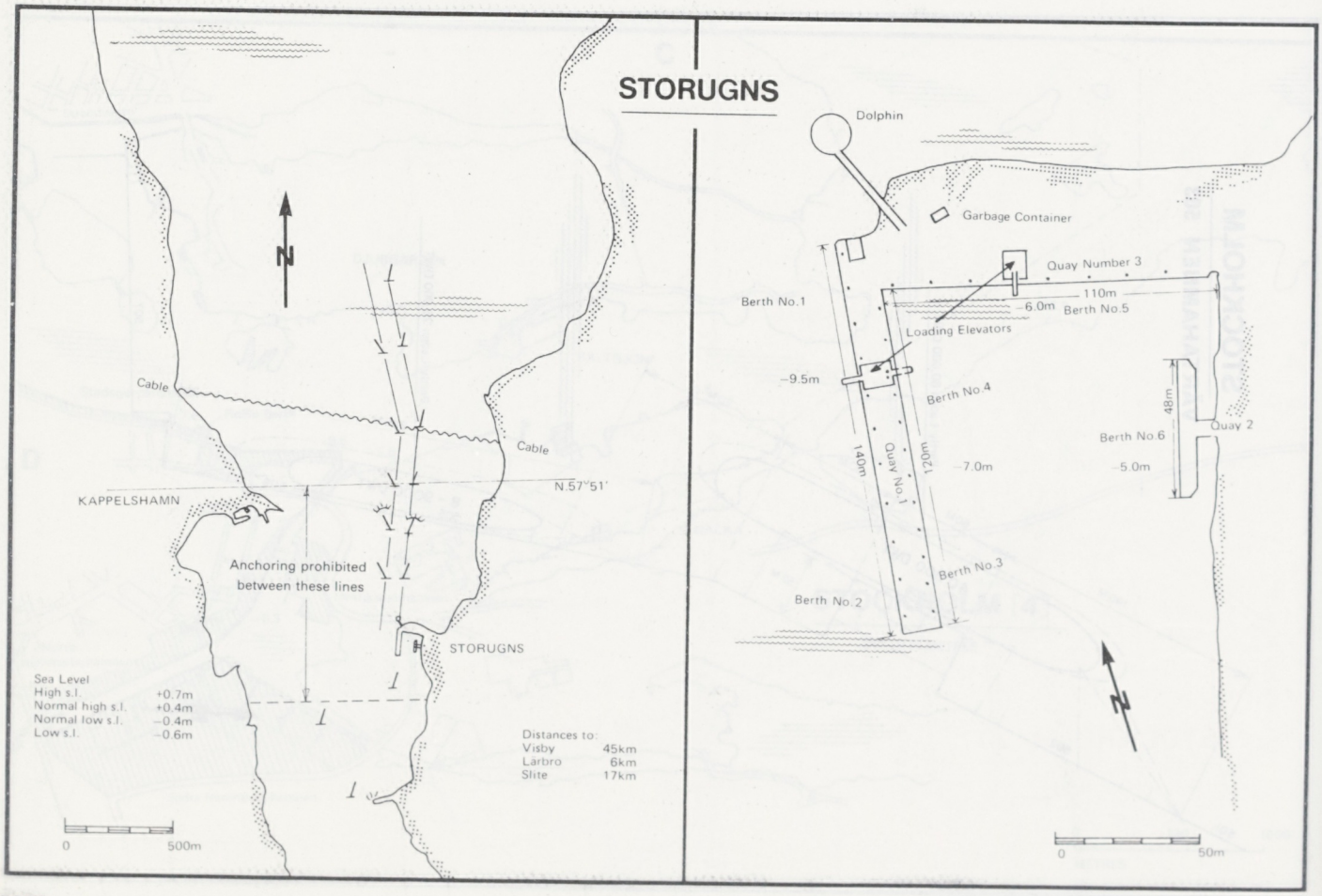

C
Strandvägen
DJURGARDEN
-13.0
SALTSJON
-5.6
Stadsgardshamnen
-7.8
RoRo Berth
-9.5
-5.0
D
NACKA
3.5
Henriksdalshamnen
-6.3
Norra
Hammarbyhamnen
STOCKHOLM [4]
DEPTH IN METRES
Sodra Hammarbyhamnen
0
500
1000
METRES

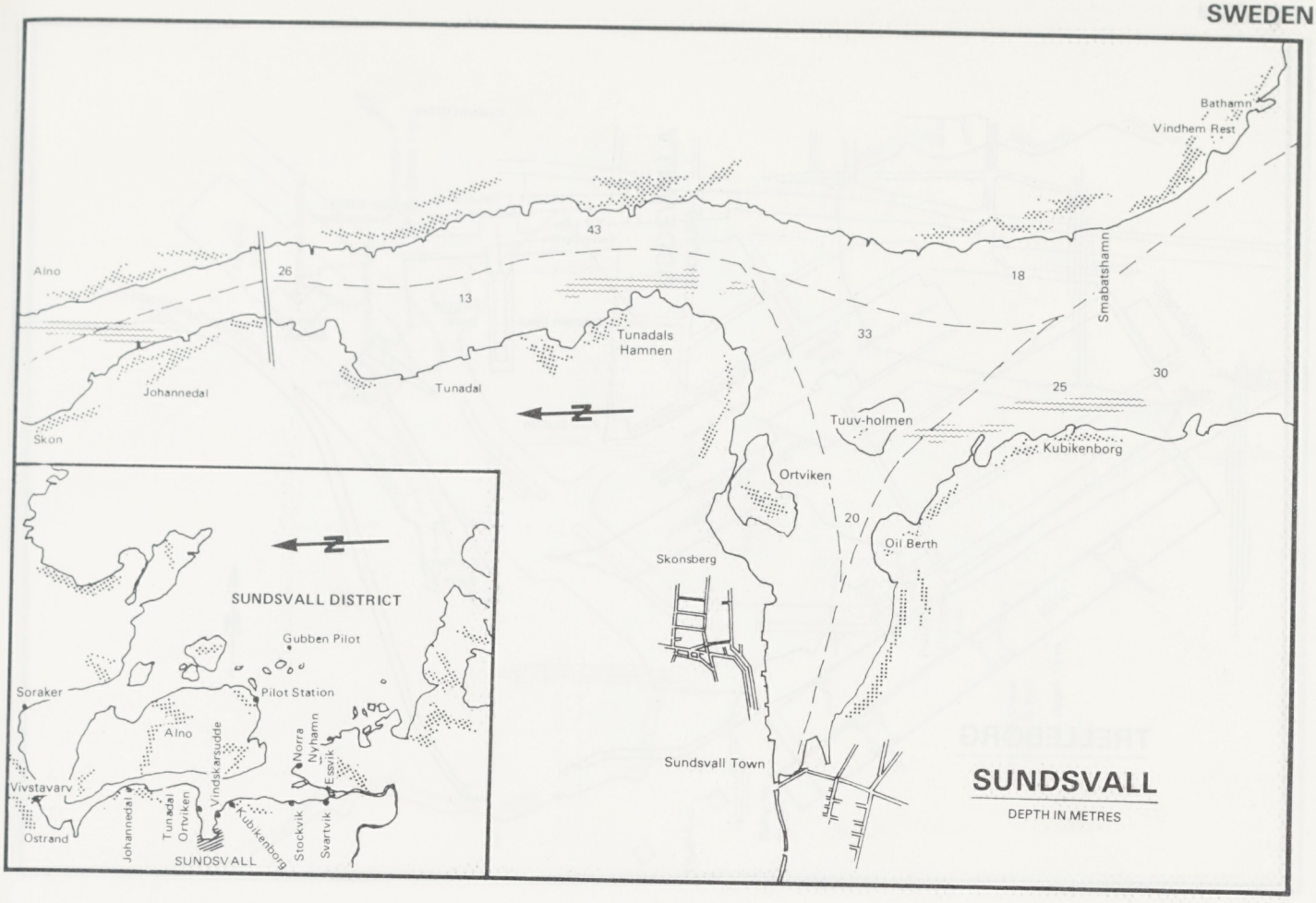

STOCKHOLM
LOUDDEN
N
63 000 DWT
40 000 DWT
706
705
704
703
707
708
60M
50M
15M
30M
85M

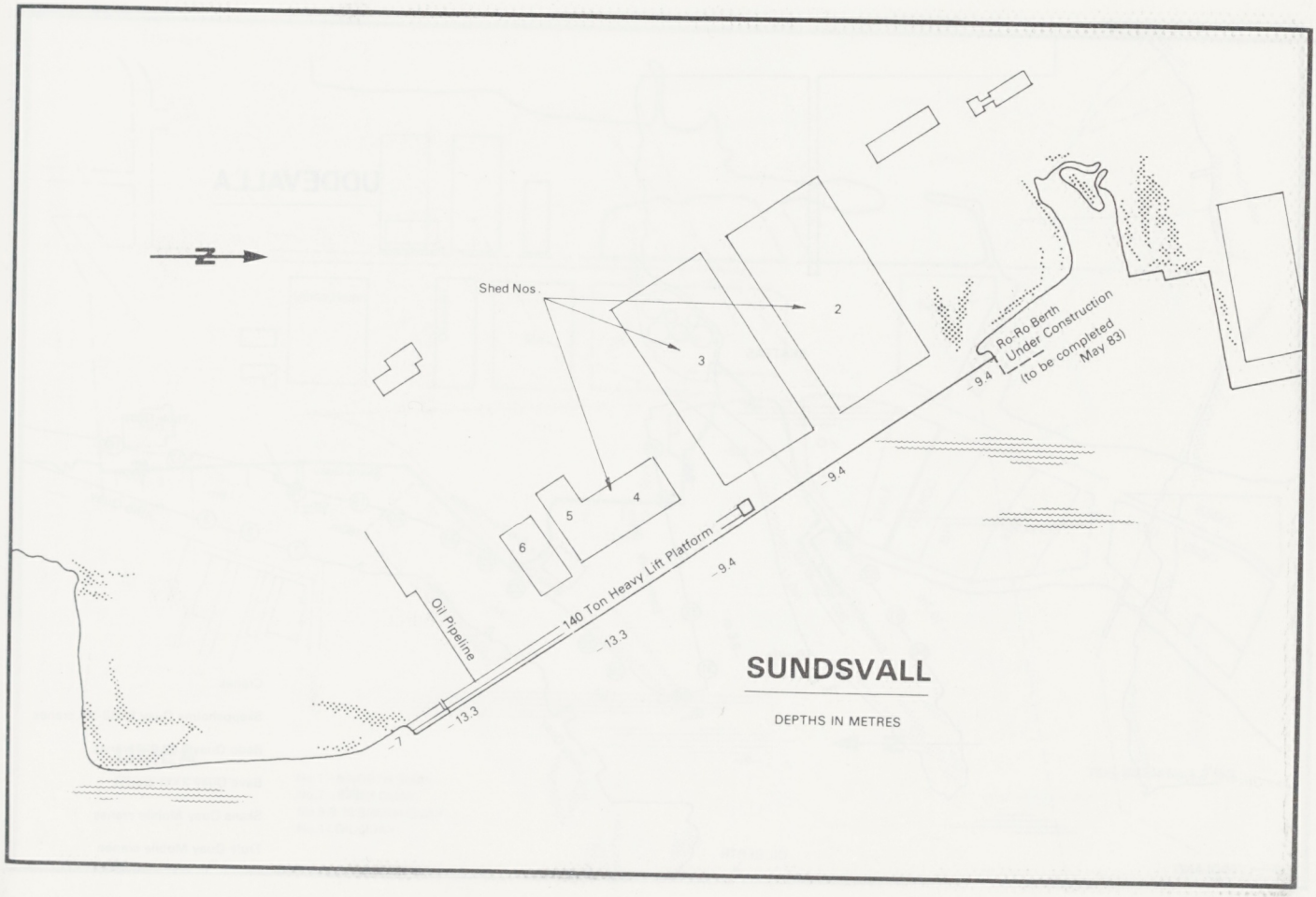

STOCKHOLM
VÄRTAHAMNEN 503
N
Partly Laden 60,000 DWT
Partly Laden 25,000 DWT
40 000 DWT
8 - 9000 DWT
140 M
60 M
60 M
70 M
240 M
32 M
501
502
503
505
506
507

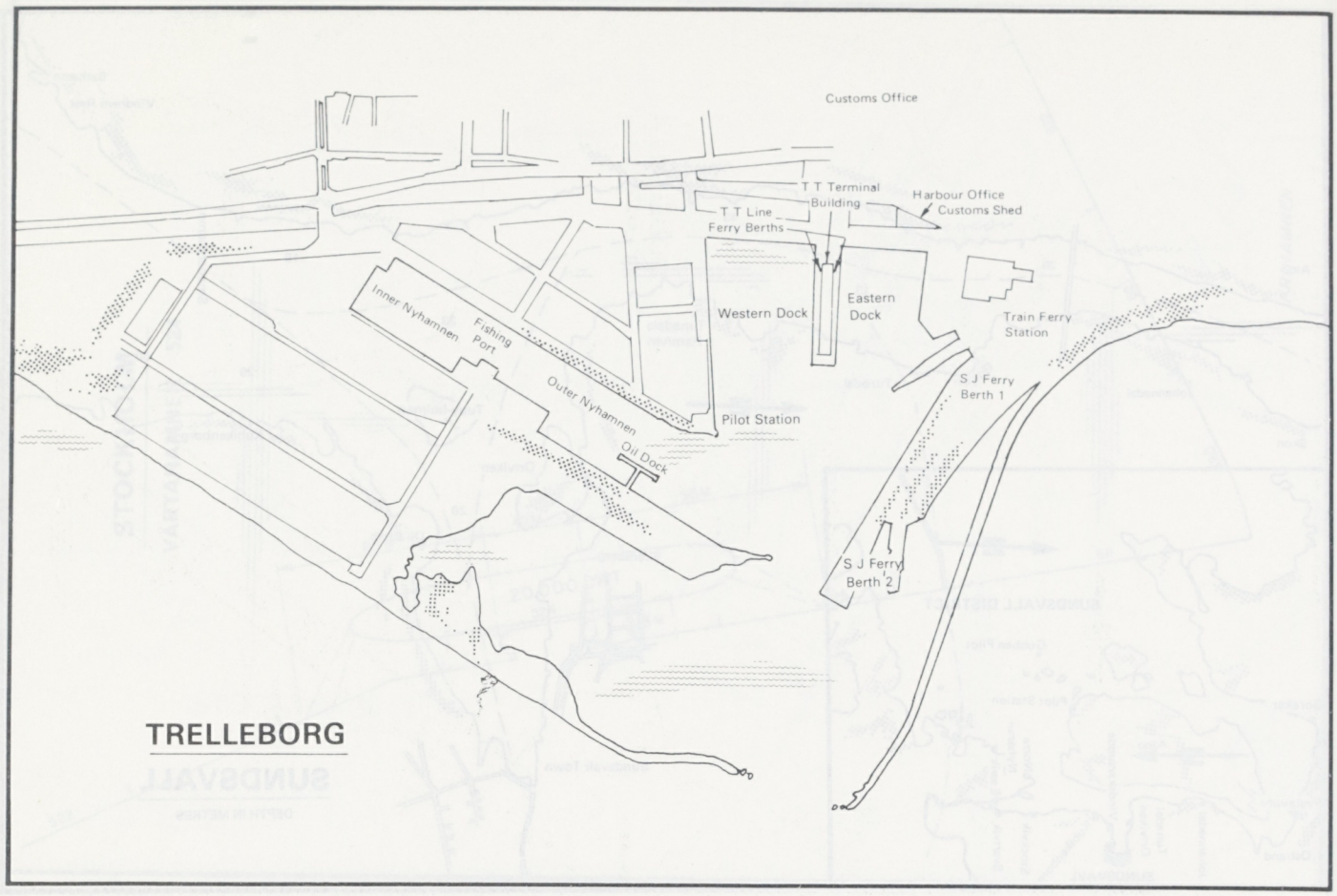

STOCKHOLM
VÄRTAHAMNEN 524
FRIHAMNEN
85 M
40 M
95 M
20 000 DWT
524
13 M
525
523
522
611
620
621
629
N

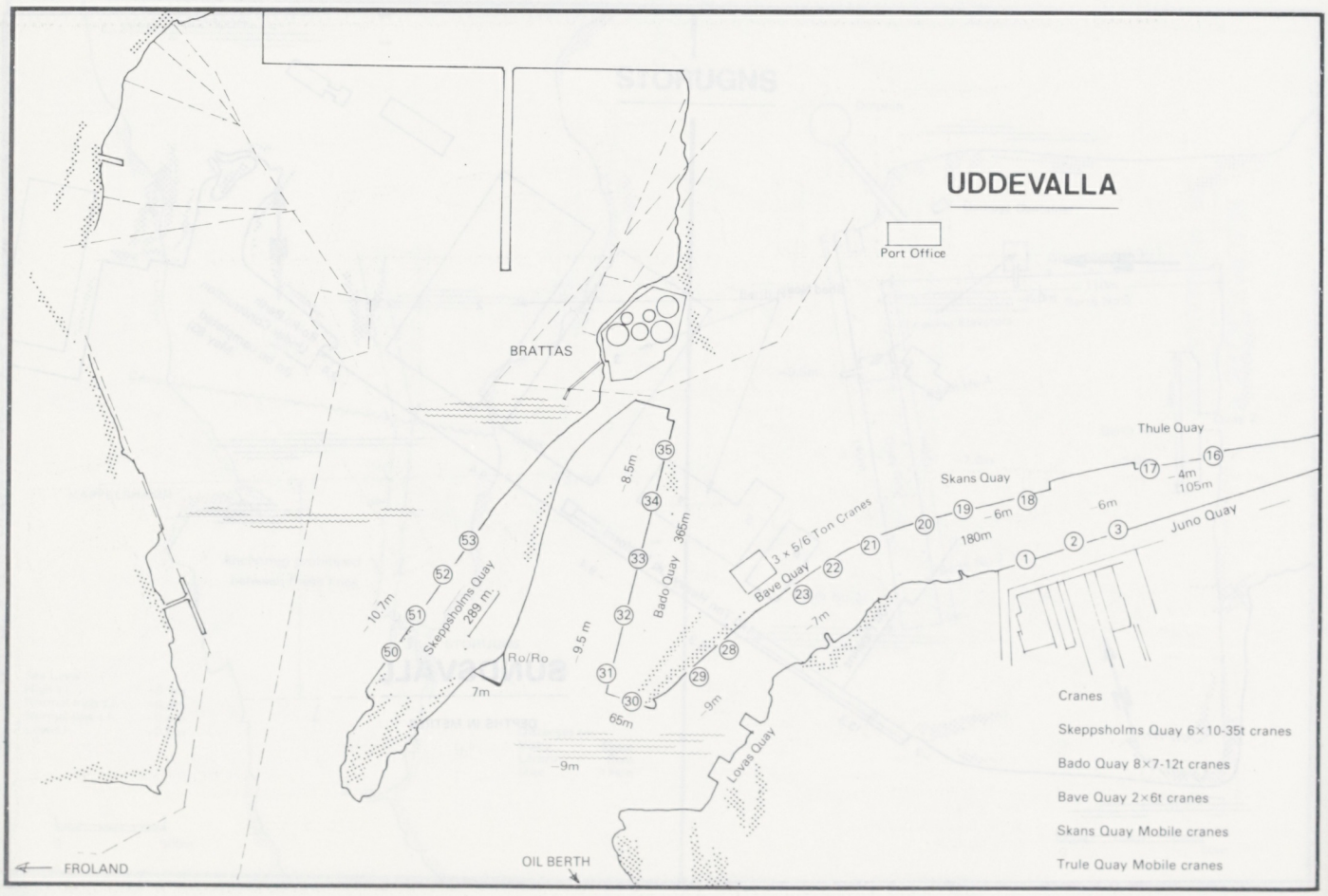
STORUGNS

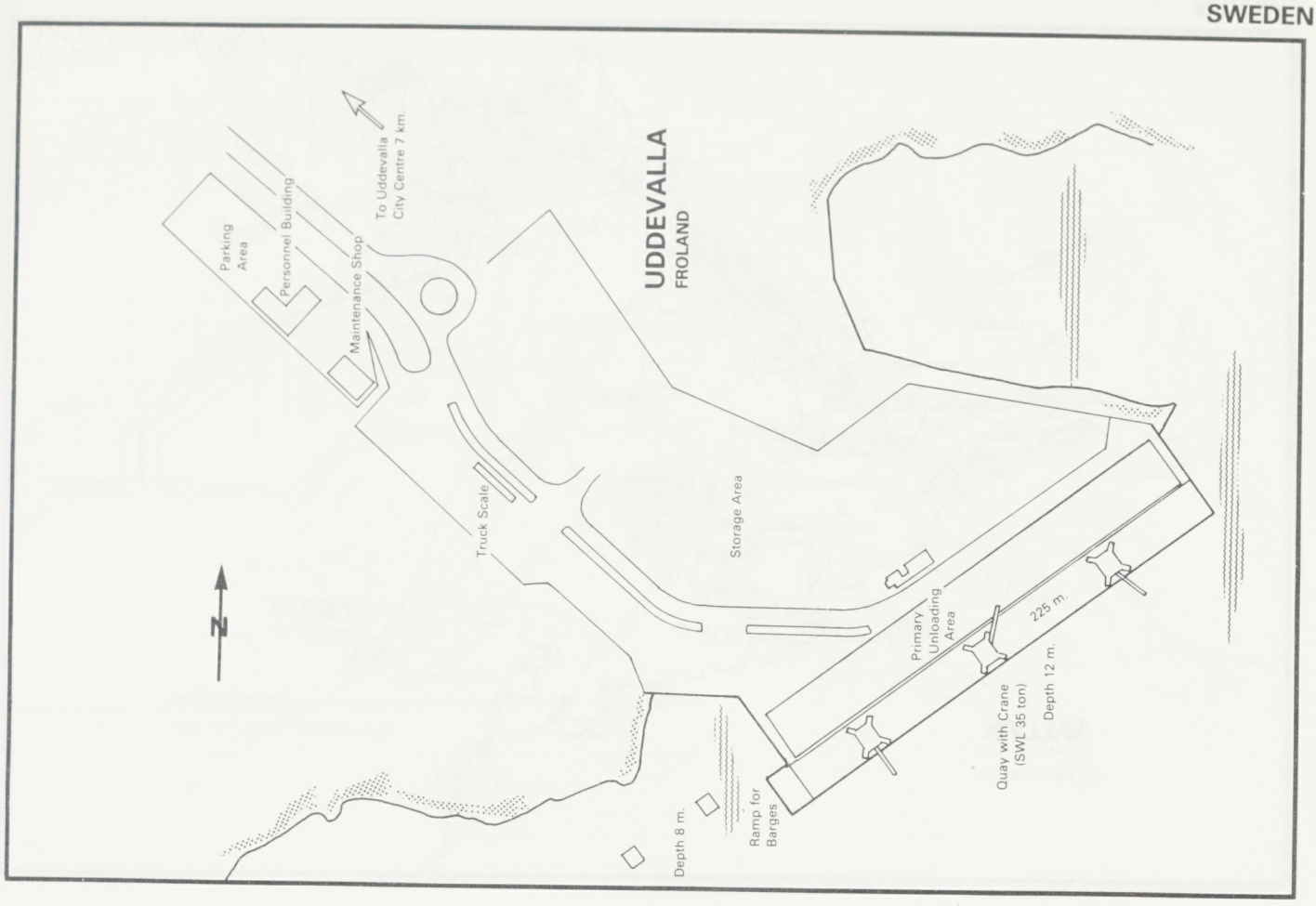

N
Cable
Cable
N.57°51'
KAPPELSHAMN
Anchoring prohibited
between these lines
STORUGNS
Sea Level
High s.l. +0.7m
Normal high s.l. +0.4m
Normal low s.l. −0.4m
Low s.l. −0.6m
Distances to:
Visby 45km
Lärbro 6km
Slite 17km
0
500m
Dolphin
Garbage Container
Quay Number 3
110m
Berth No.1
−6.0m
Berth No.5
Loading Elevators
−9.5m
Berth No.4
48m
Quay 2
Berth No.6
140m
Quay No.1
120m
−7.0m
−5.0m
Berth No.3
Berth No.2
N
0
50m

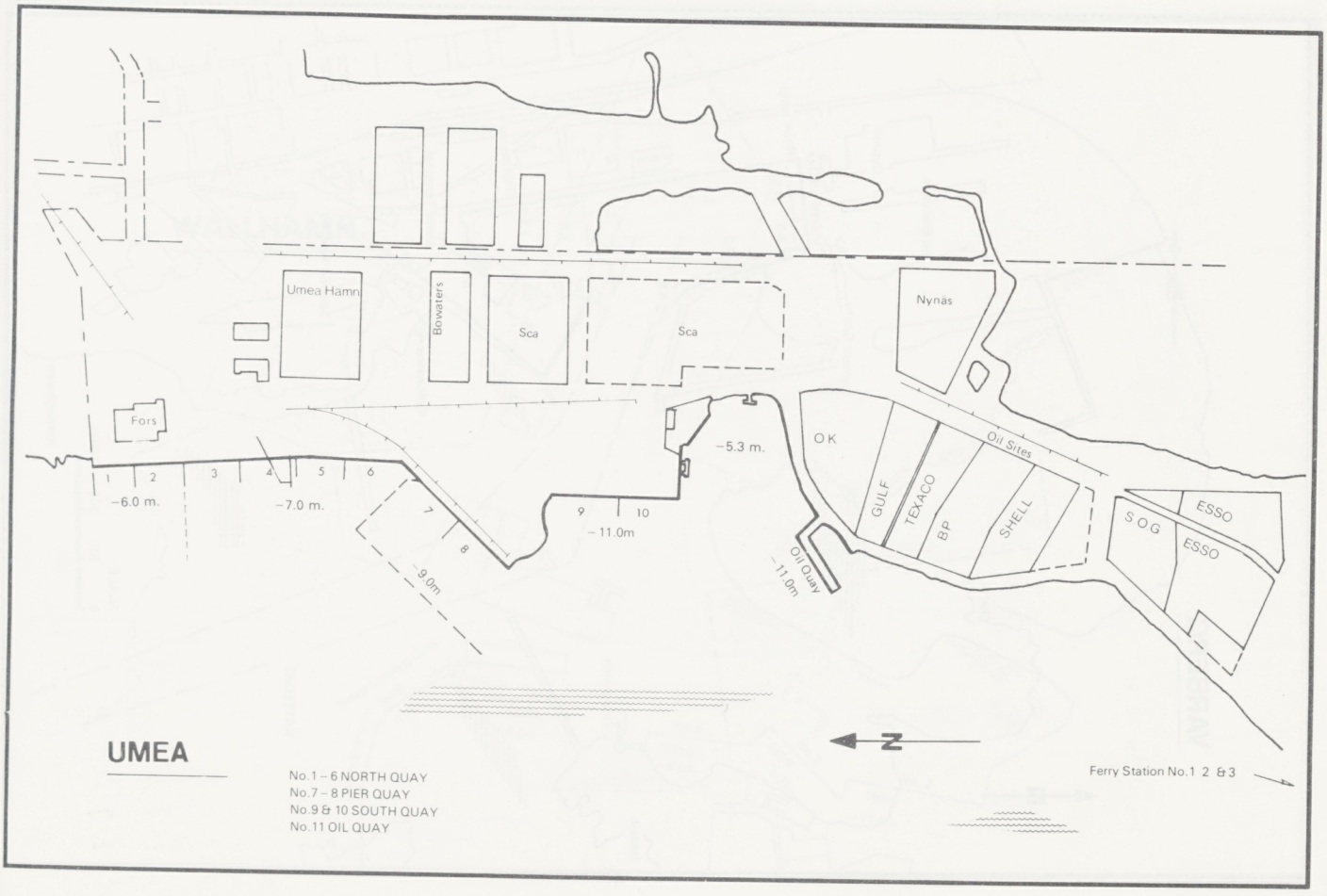

Bathamn
Vindhem Rest
Alno
26
43
13
18
Smabatshamn
Tunadals Hamnen
33
Johannedal
Tunadal
25
30
Skon
Tuuv-holmen
Kubikenborg
Ortviken
20
Oil Berth
Skonsberg
SUNDSVALL DISTRICT
Gubben Pilot
Soraker
Pilot Station
Alno
Norra Nyhamn
Vindskarsudde
Essvik
Vivstavarv
Ostrand
Johannedal
Tunadal
Ortviken
Kubikenborg
Stockvik
Svartvik
SUNDSVALL
Sundsvall Town
SUNDSVALL
DEPTH IN METRES


Shed Nos.
2
3
4
5
6
Ro-Ro Berth Under Construction (to be completed May 83)
-9.4
-9.4
-9.4
140 Ton Heavy Lift Platform
Oil Pipeline
-13.3
-13.3
-7
SUNDSVALL
DEPTHS IN METRES


Customs Office
T T Terminal Building
Harbour Office
Customs Shed
T T Line Ferry Berths
Western Dock
Eastern Dock
Train Ferry Station
Inner Nyhamnen
Fishing Port
Outer Nyhamnen
Pilot Station
Oil Dock
S J Ferry Berth 1
S J Ferry Berth 2
TRELLEBORG

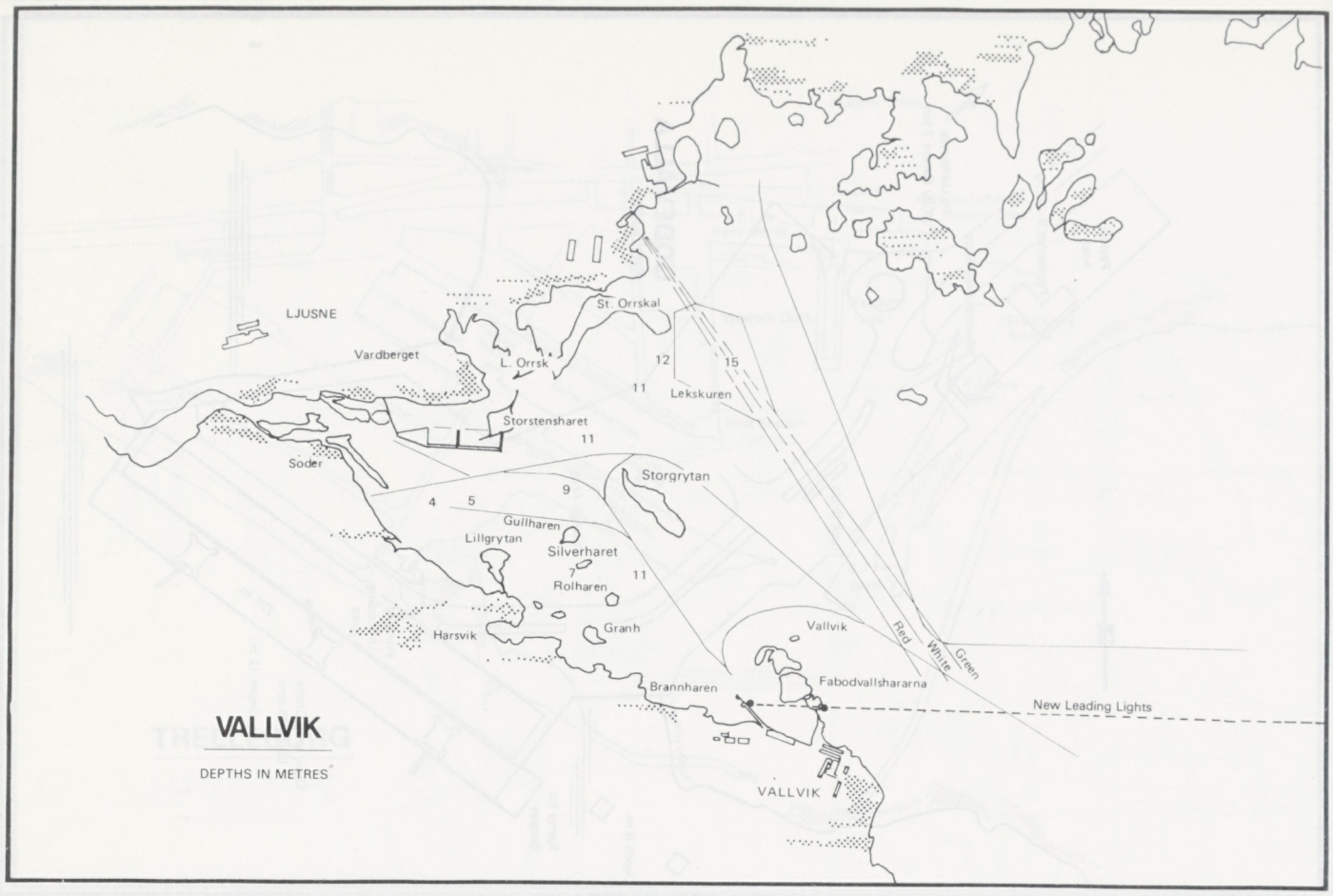

UDDEVALLA
Port Office
BRATTAS
Thule Quay
Skans Quay
Juno Quay
Bave Quay
Bado Quay
Skeppsholms Quay
289 m.
Ro/Ro
Lovas Quay
3 x 5/6 Ton Cranes
180m
105m
65m
FROLAND
OIL BERTH
Cranes
Skeppsholms Quay 6×10-35t cranes
Bado Quay 8×7-12t cranes
Bave Quay 2×6t cranes
Skans Quay Mobile cranes
Trule Quay Mobile cranes

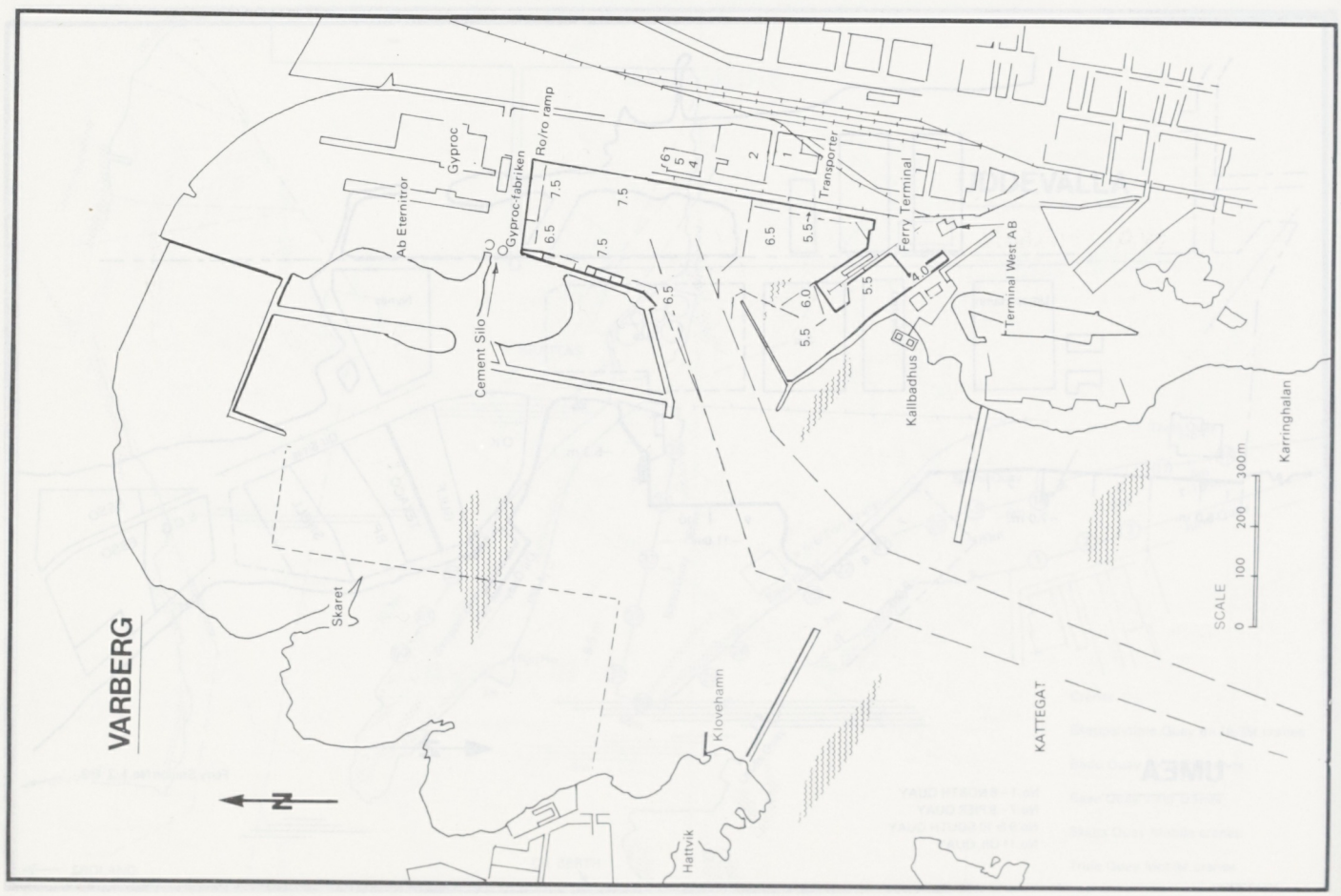


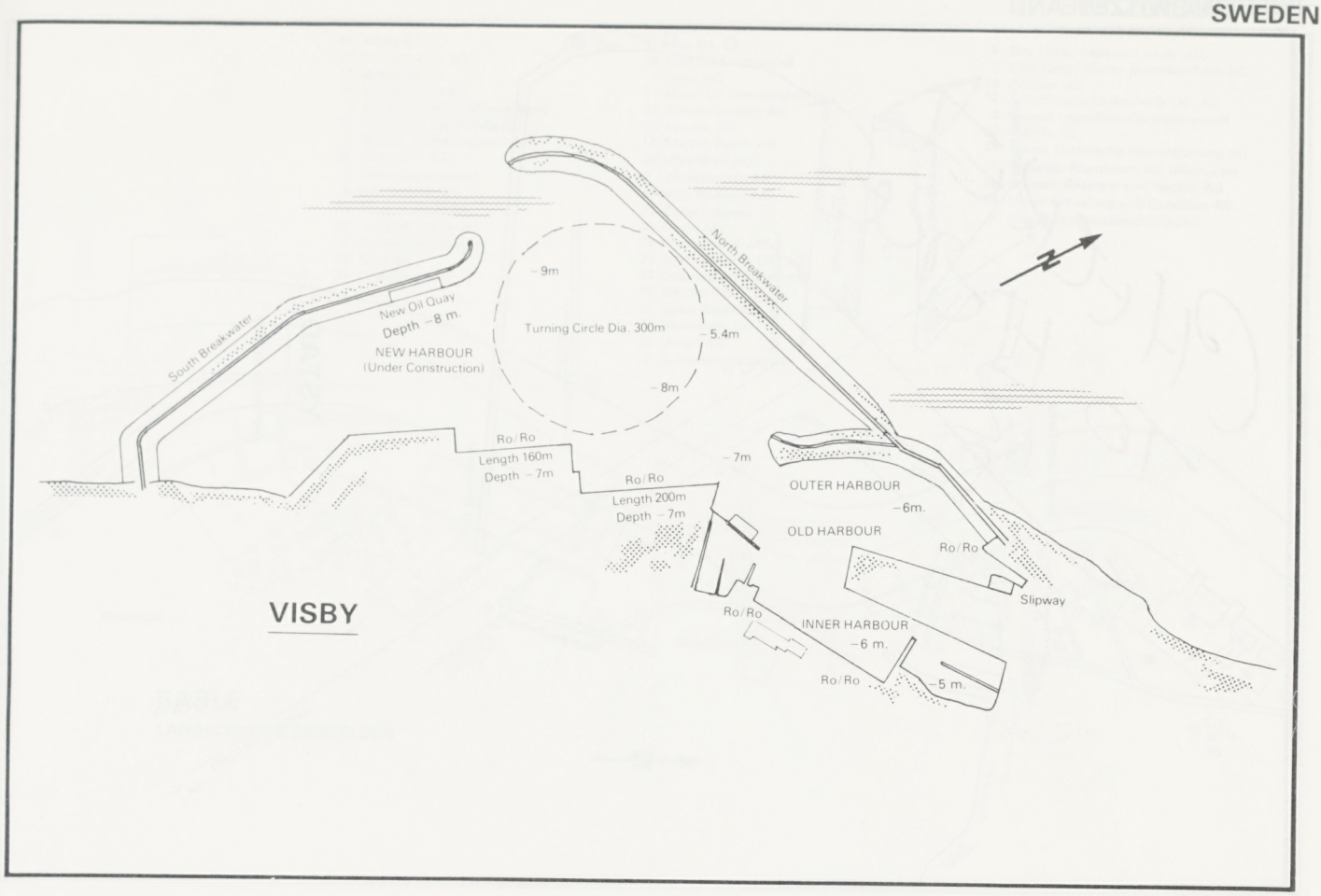


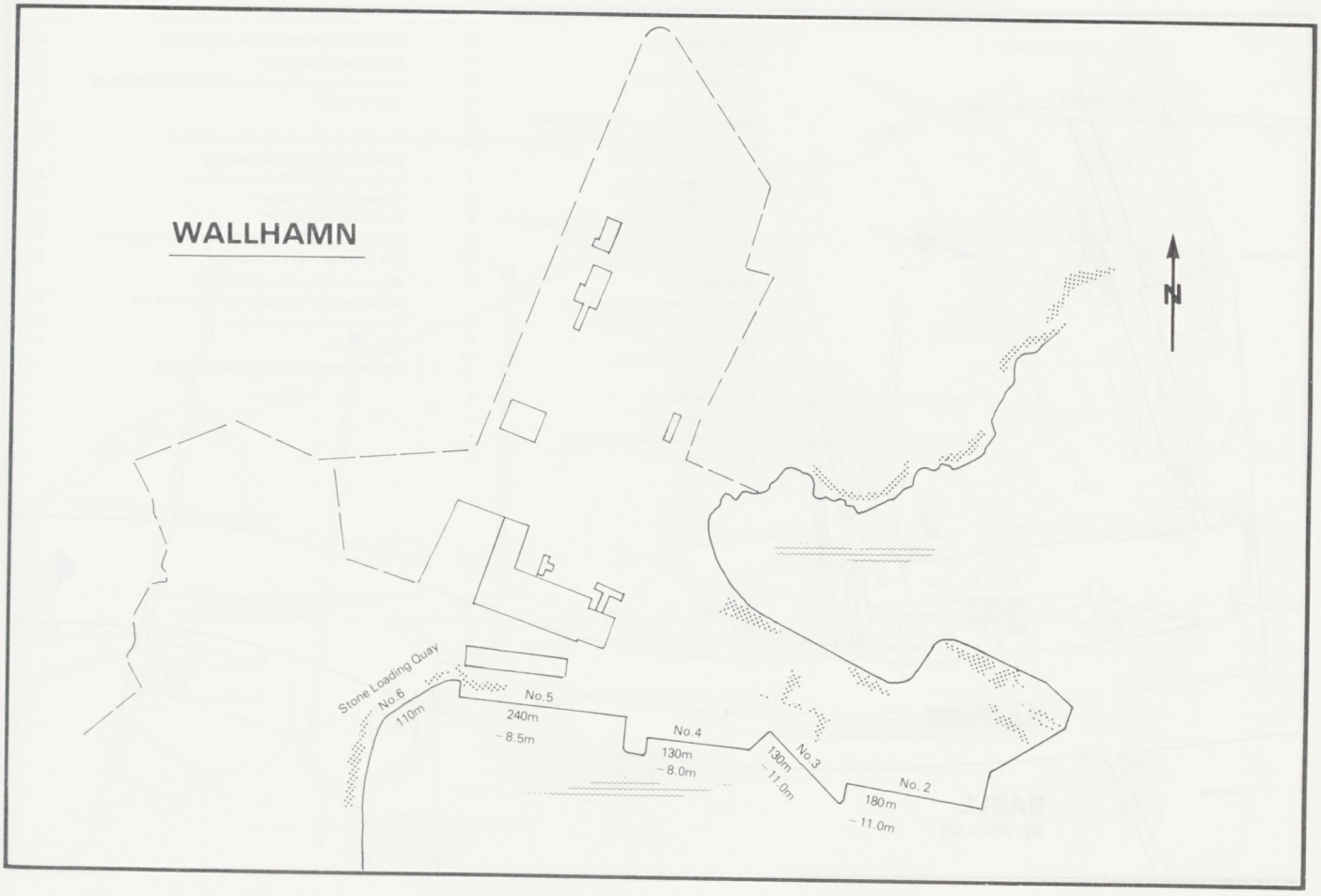
UMEA

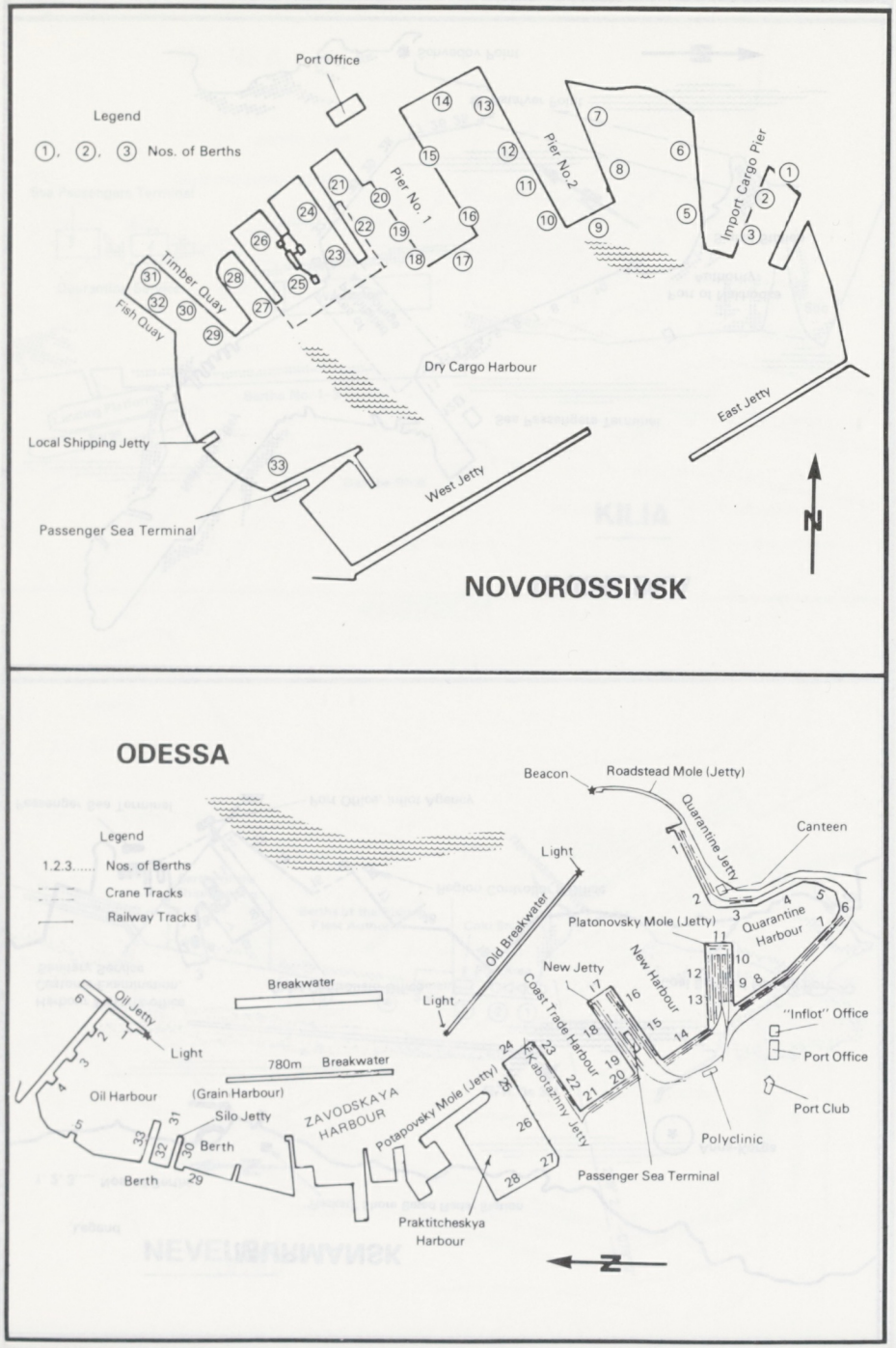
No.1 – 6 NORTH QUAY
No.7 – 8 PIER QUAY
No.9 & 10 SOUTH QUAY
No.11 OIL QUAY


LJUSNE
Vardberget
St. Orrskal
L. Orrsk
12
15
11
Lekskuren
Storstensharet
11
Soder
Storgrytan
9
4
5
Gullharen
Lillgrytan
Silverharet
7
11
Rolharen
Granh
Harsvik
Vallvik
Red
White
Green
Fabodvallshararna
Brannharen
New Leading Lights
VALLVIK
DEPTHS IN METRES
VALLVIK


VARBERG
Gyproc
Ro/ro ramp
Ab Eternitror
Gyproc-fabriken
Cement Silo
Transporter
Ferry Terminal
Terminal West AB
Kallbadhus
Karringhalan
Skaret
Klovehamn
Hattvik
KATTEGAT
SCALE
0
100
200
300m
N


VISBY
South Breakwater
New Oil Quay
Depth −8 m.
NEW HARBOUR
(Under Construction)
Turning Circle Dia. 300m
−9m
−5.4m
−8m
North Breakwater
Ro/Ro
Length 160m
Depth −7m
Ro/Ro
Length 200m
Depth −7m
−7m
OUTER HARBOUR
−6m.
OLD HARBOUR
Ro/Ro
Slipway
Ro/Ro
INNER HARBOUR
−6 m.
Ro/Ro
−5 m.
N


WALLHAMN
N
Stone Loading Quay
No.6
110m
No.5
240m
−8.5m
No.4
130m
−8.0m
No.3
130m
−11.0m
No. 2
180m
−11.0m



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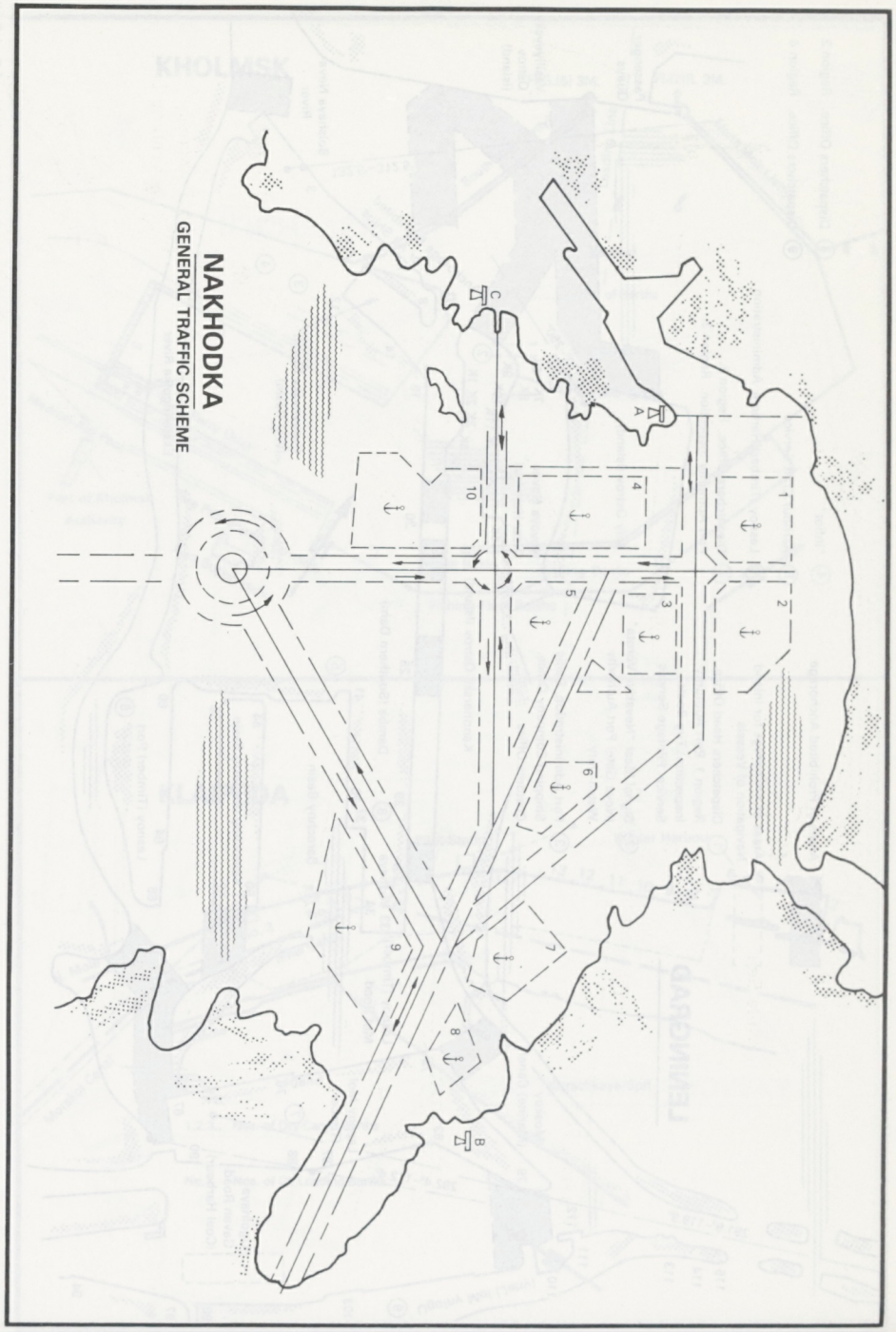

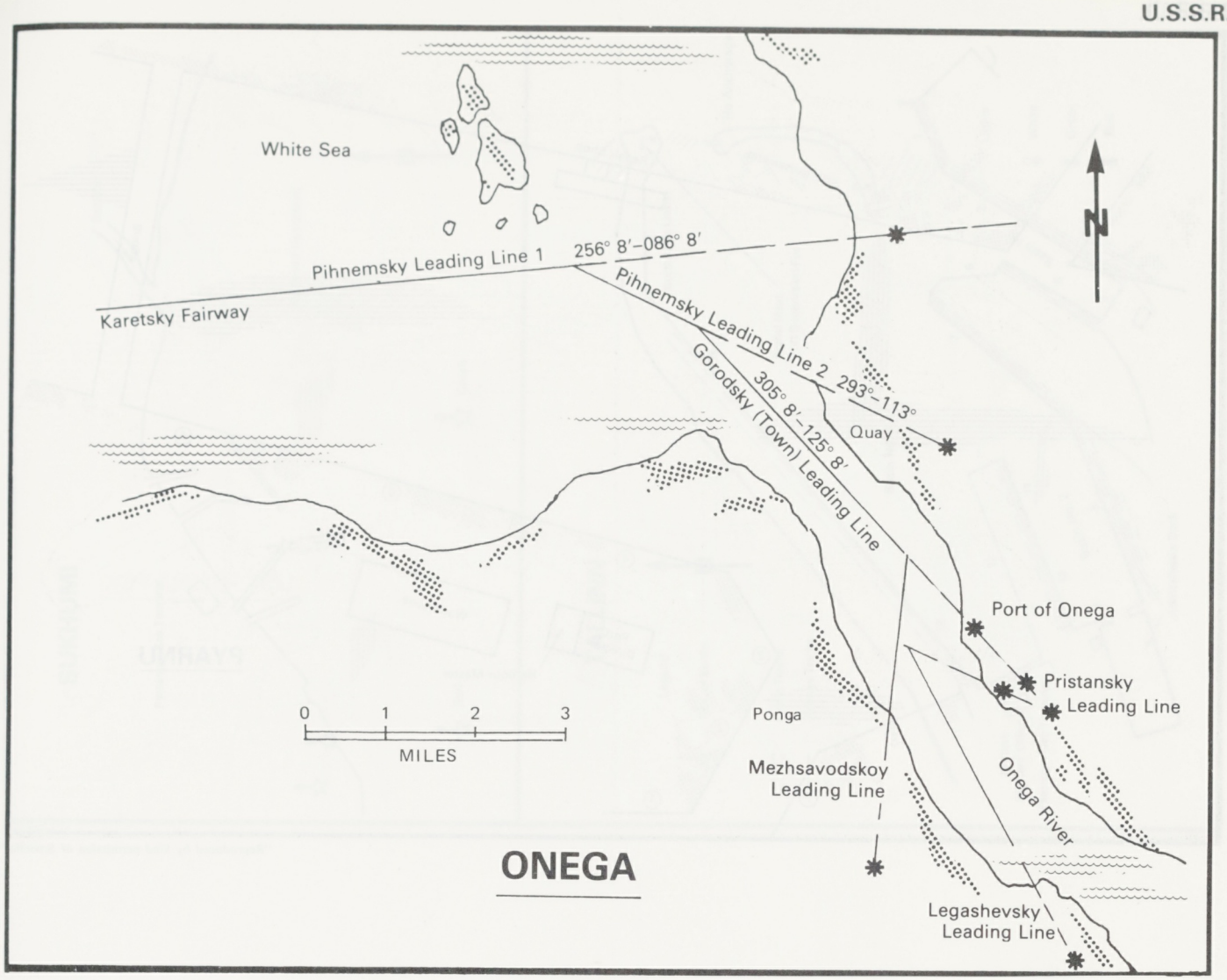

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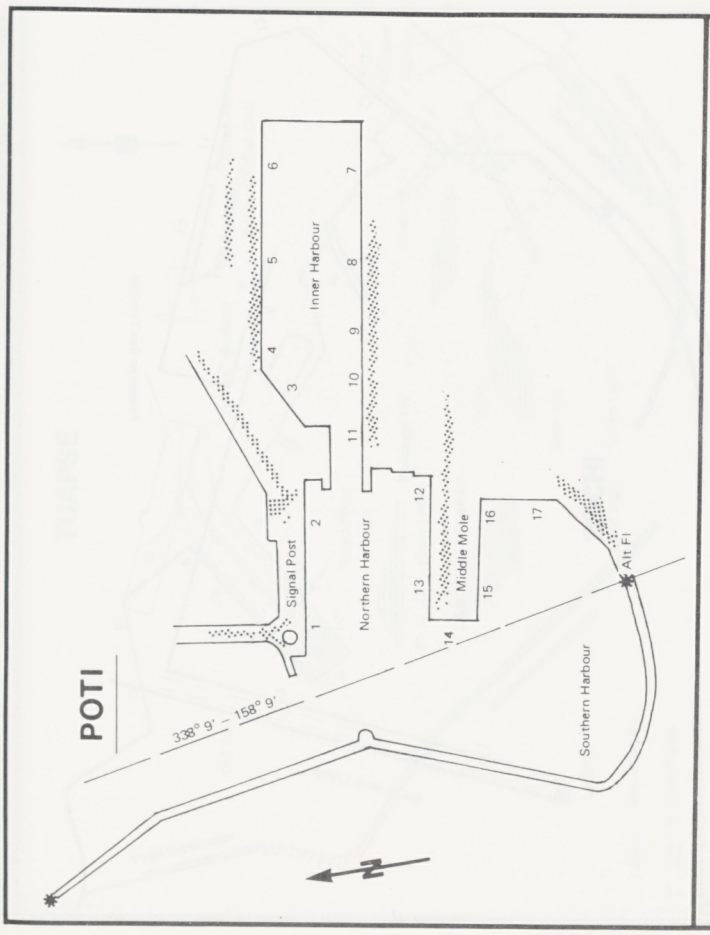

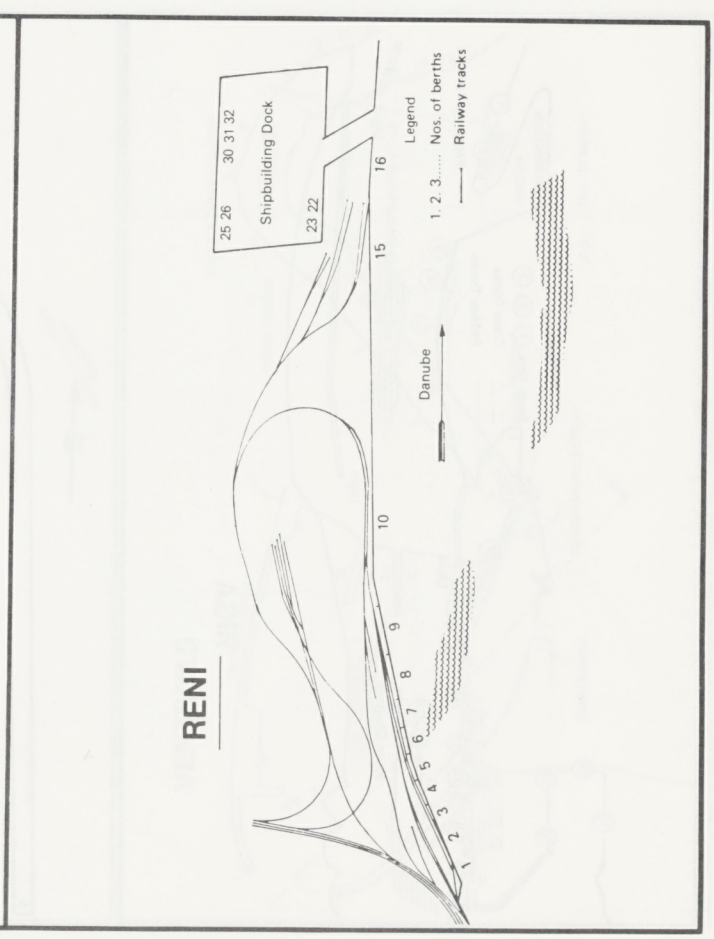

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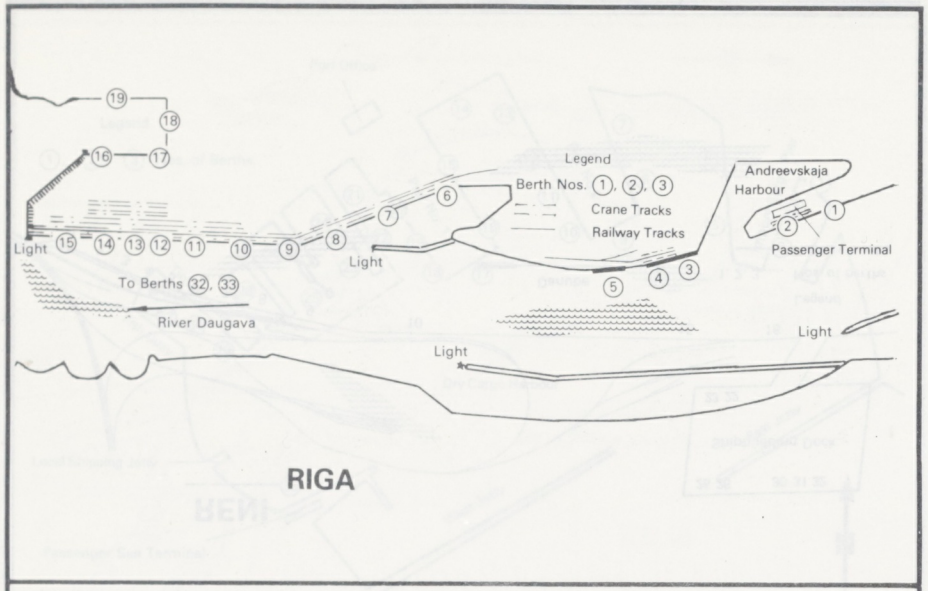
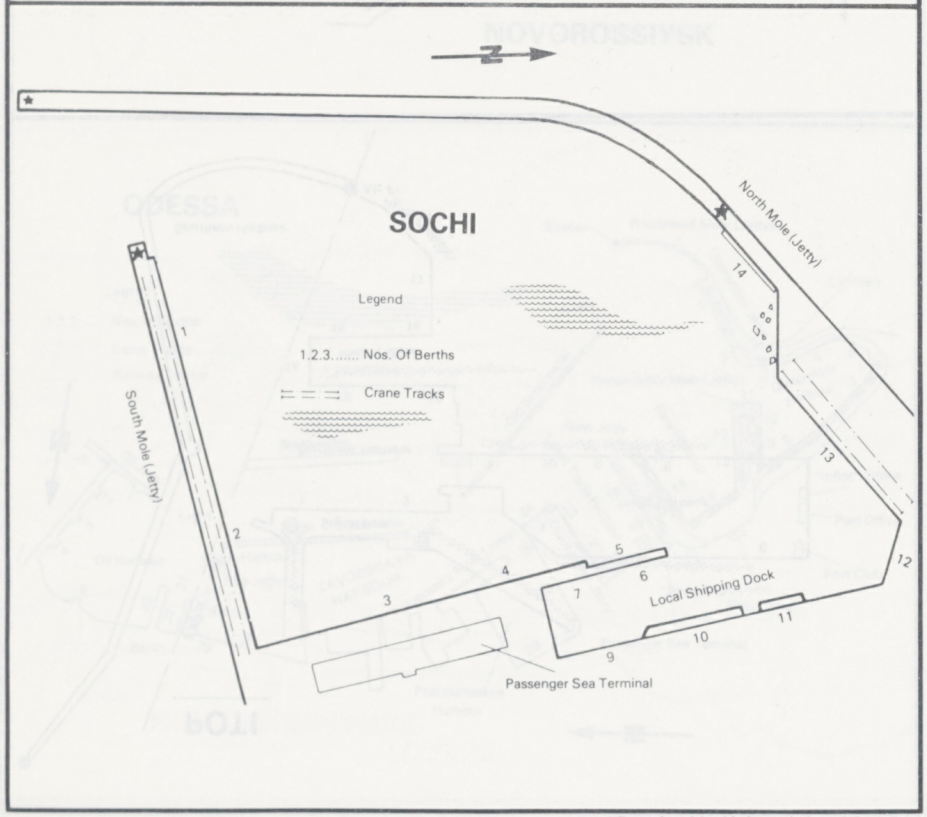


RIGA



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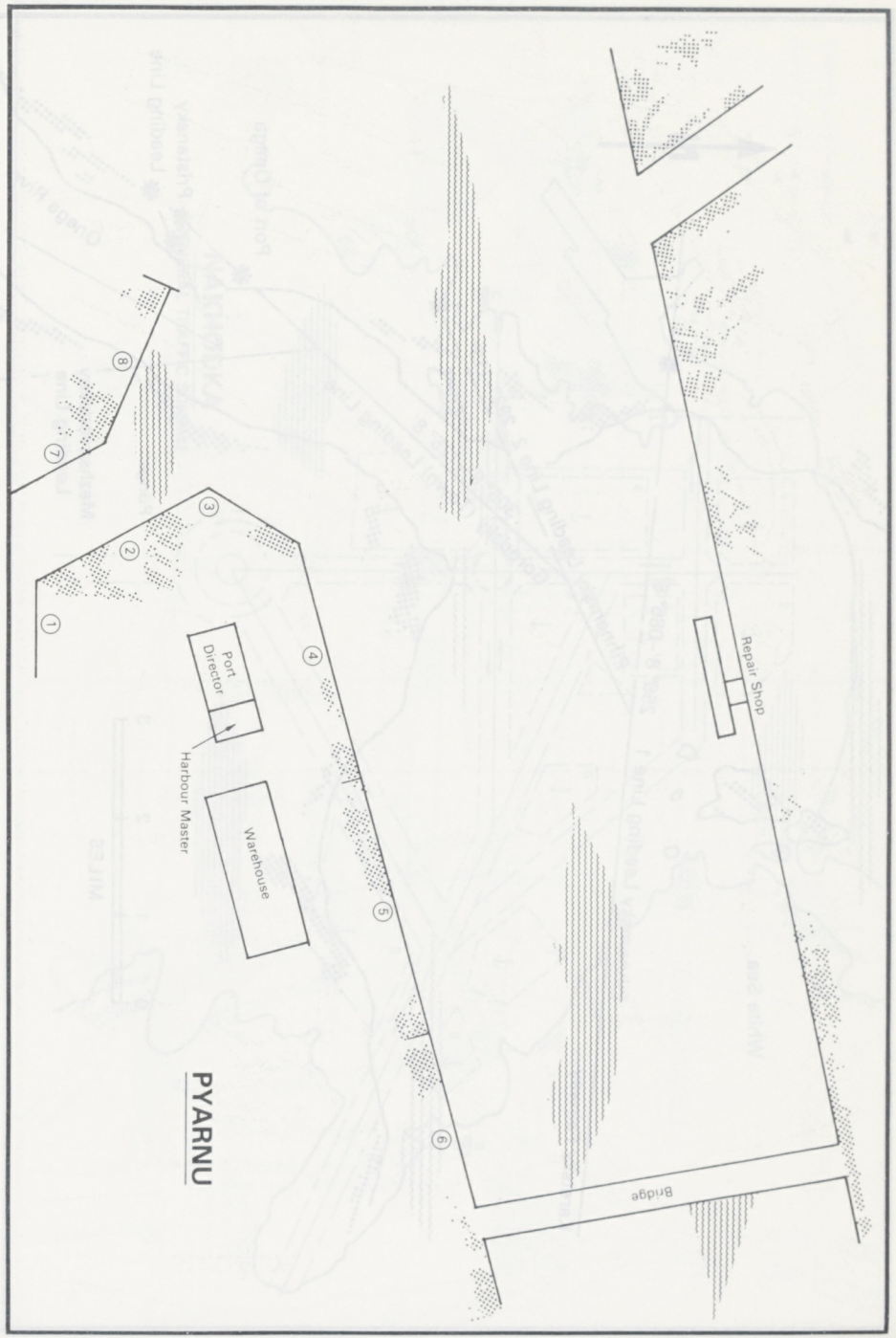

PYARNU

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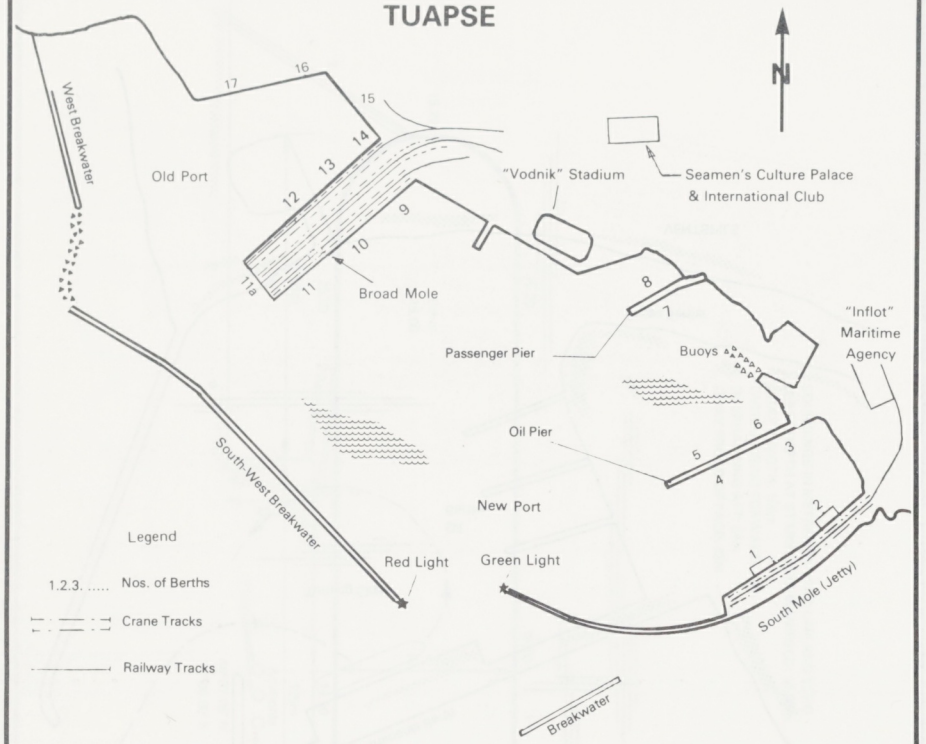
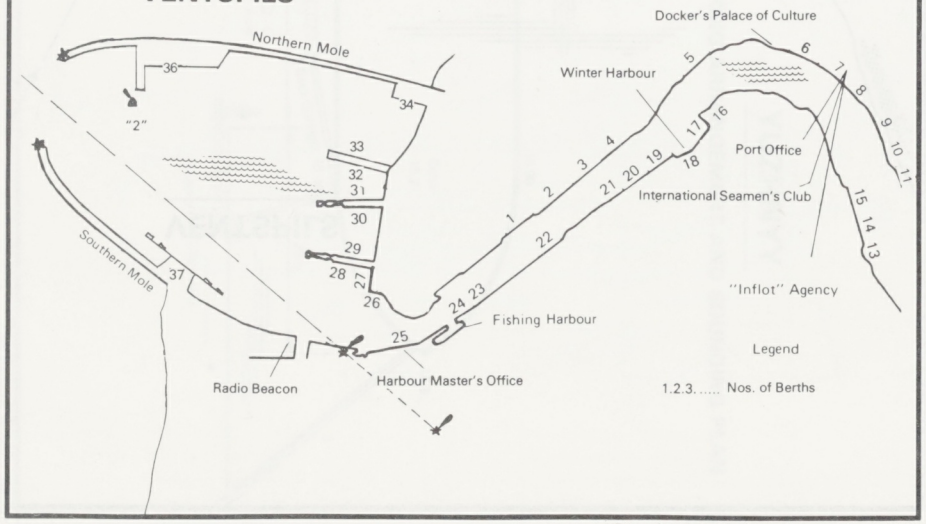
TUAPSE



VENTSPILS



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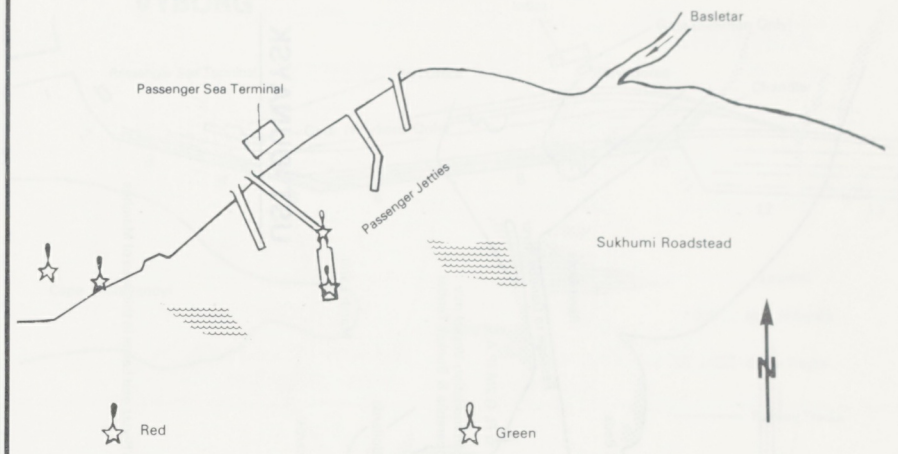
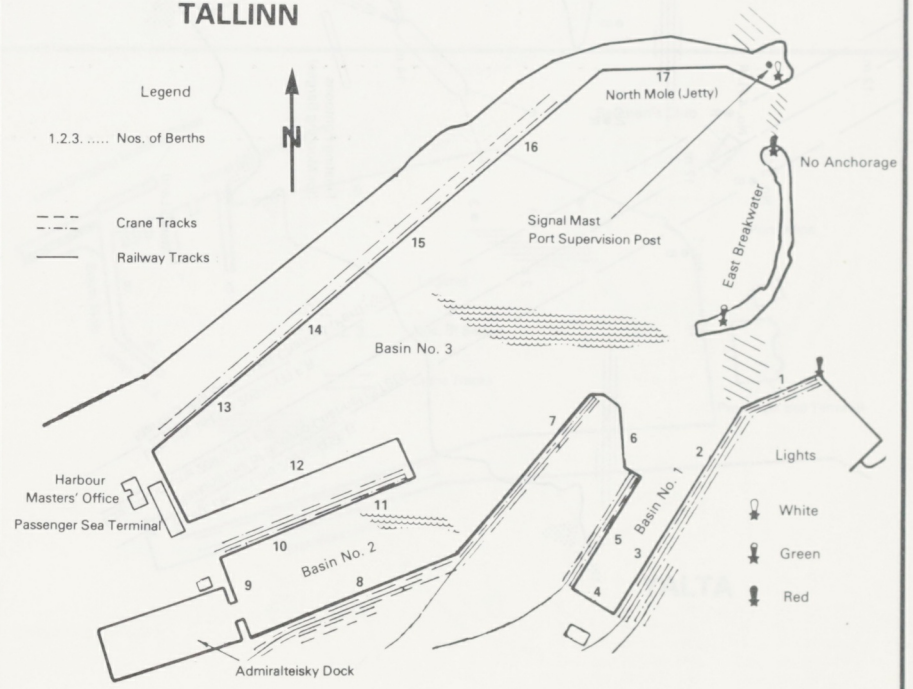
SUKHUMI



TALLINN



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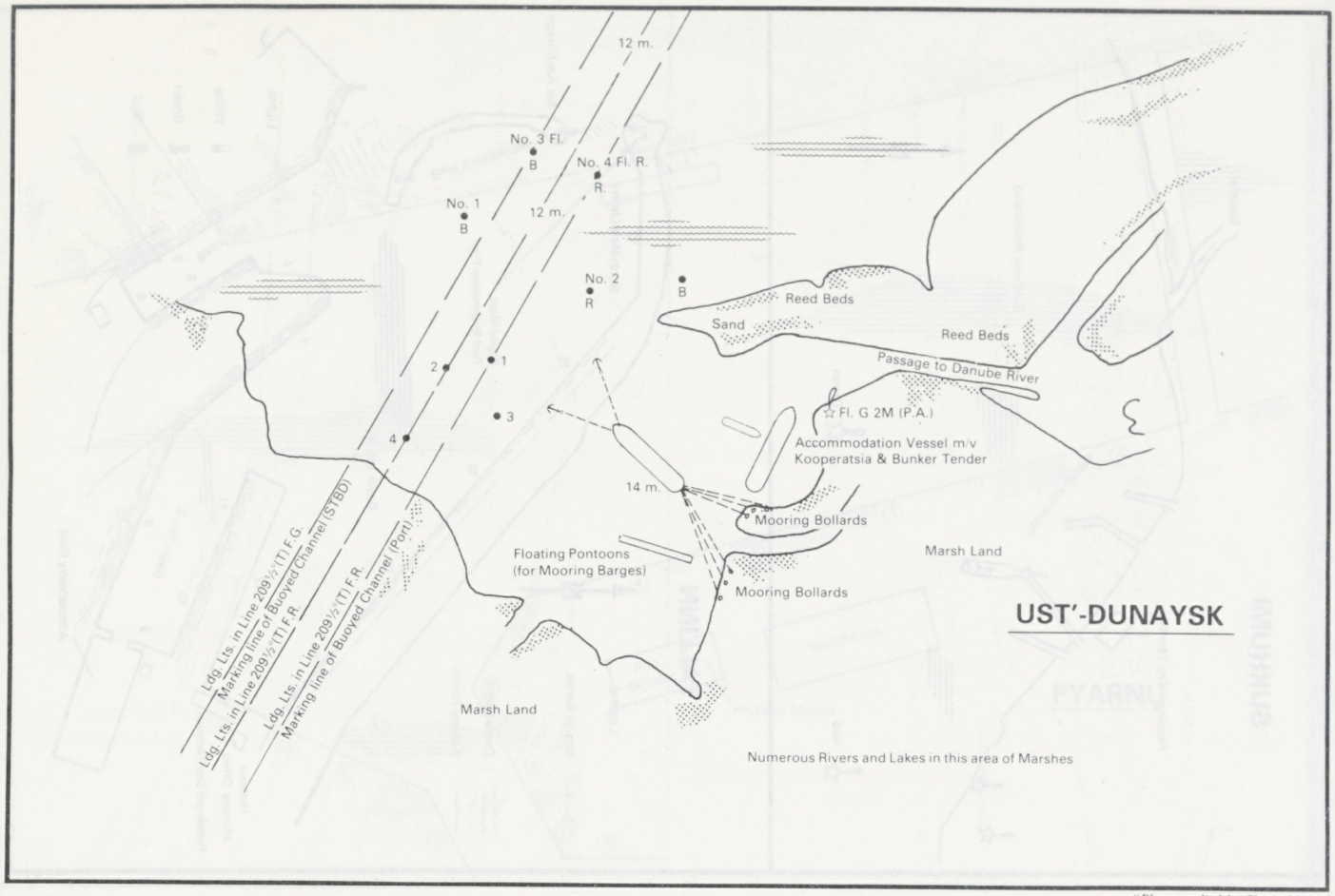
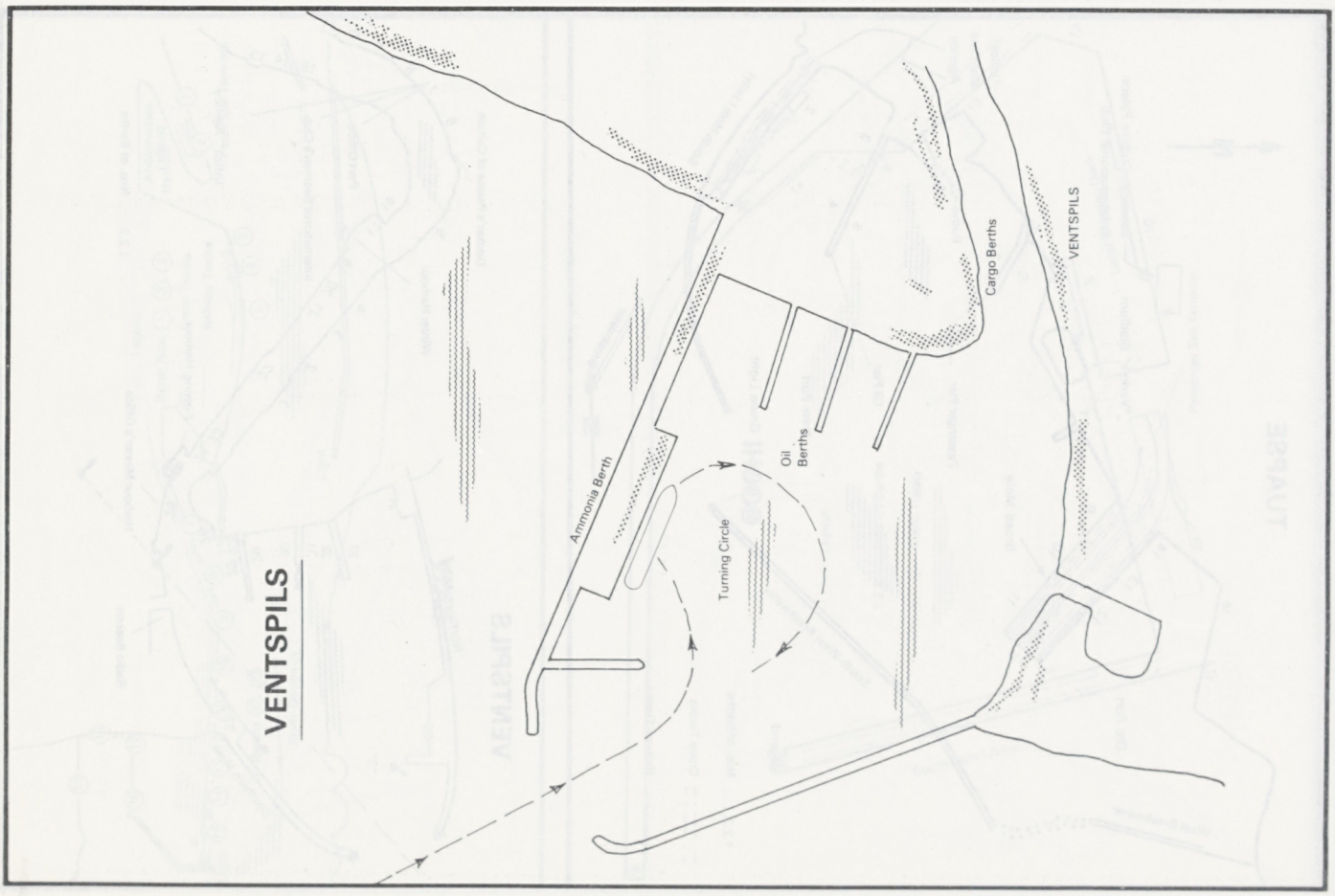
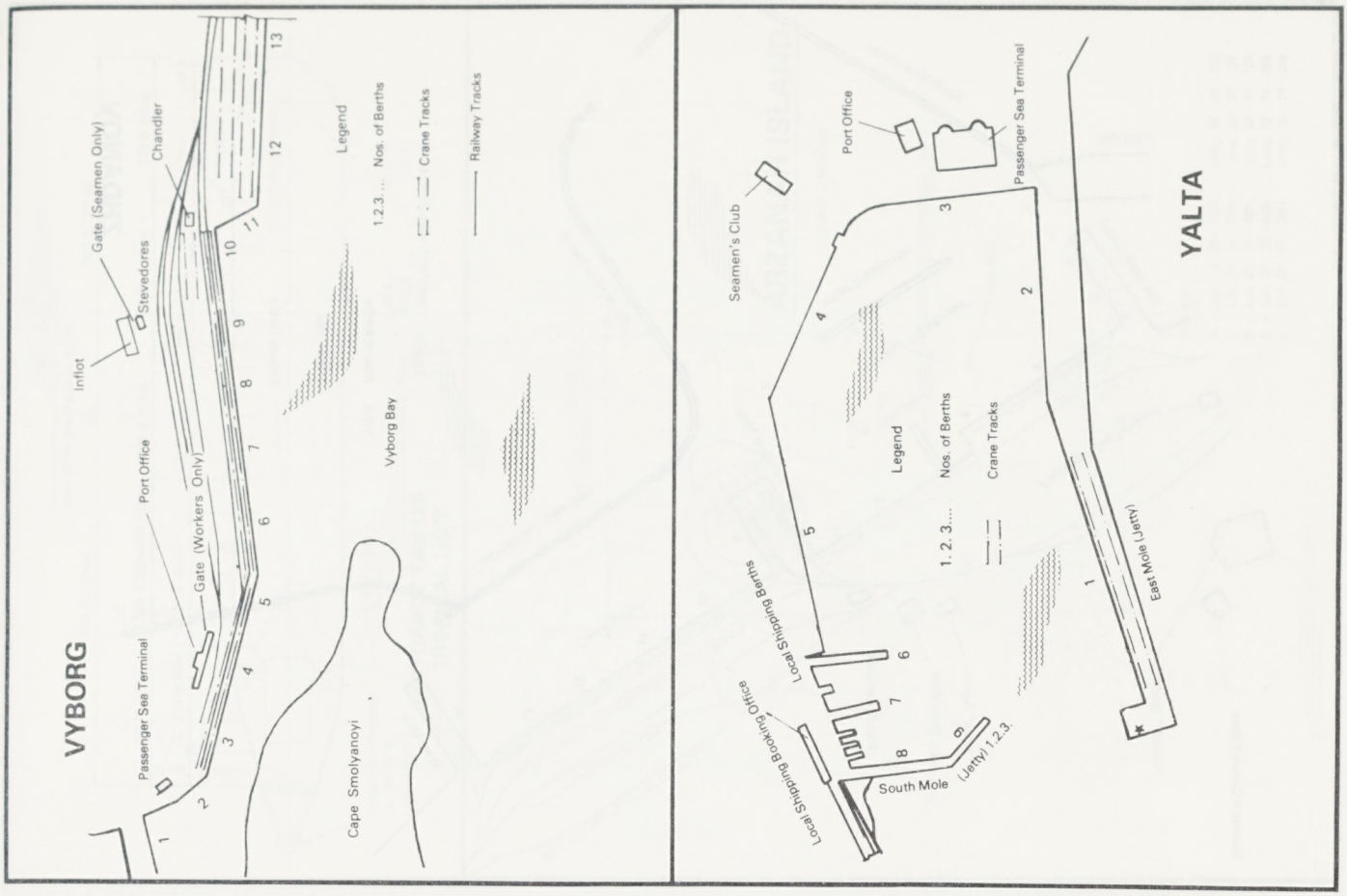


"Plan supplied by Ship's Master"



"Plan supplied by Ship's Master"



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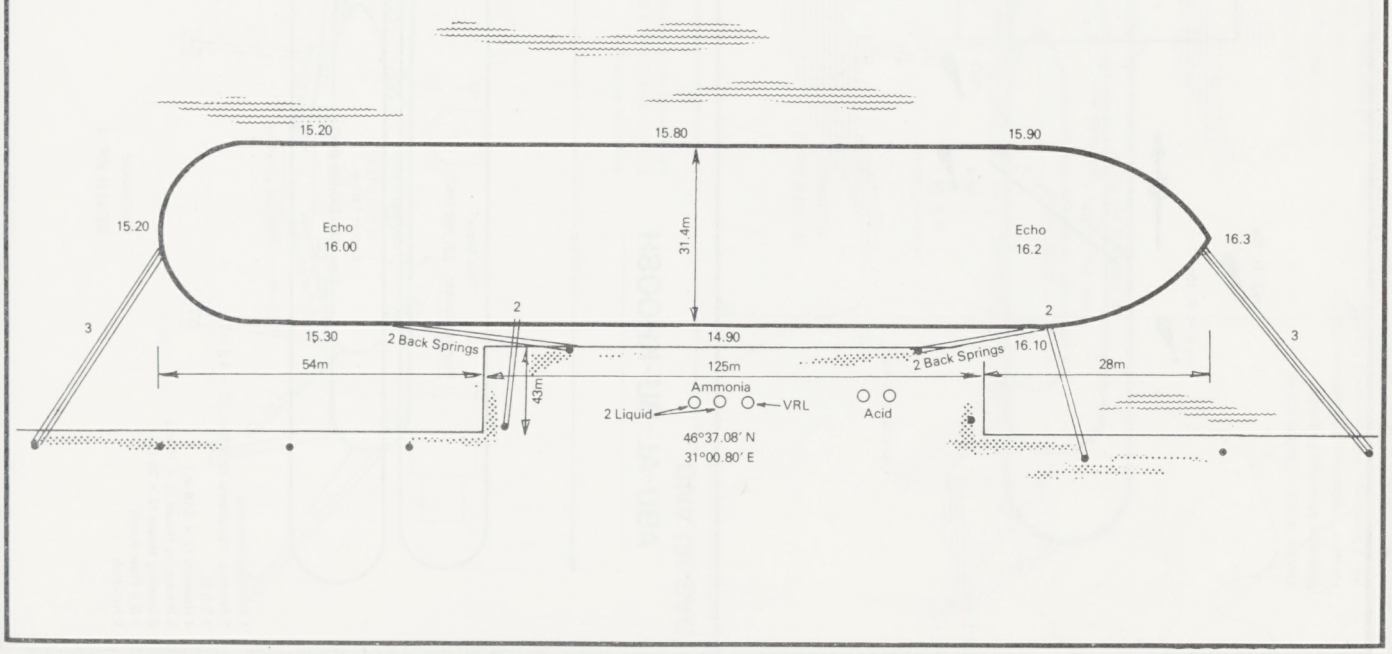
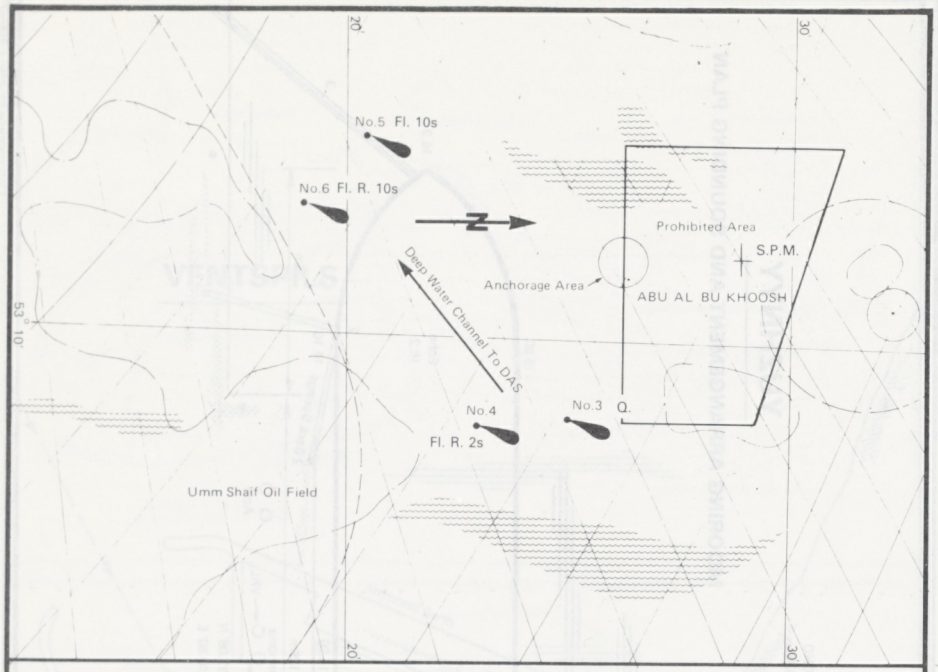
SOUNDINGS IN METRES BY LEAD LINE AND ECHO
LEAST DEPTH AT STARBOARD MANIFOLD: 14.90m
QUAY LENGTH: 125m
OVERHANGING FORWARD: 28m
OVERHANGING AFT: 54m
QUAY PROUD OF FACE: 43m

YUZHNYY

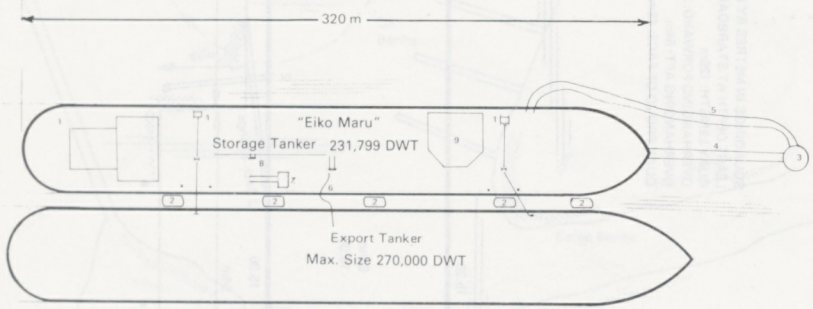
MOORING ARRANGEMENT AND SOUNDING PLAN



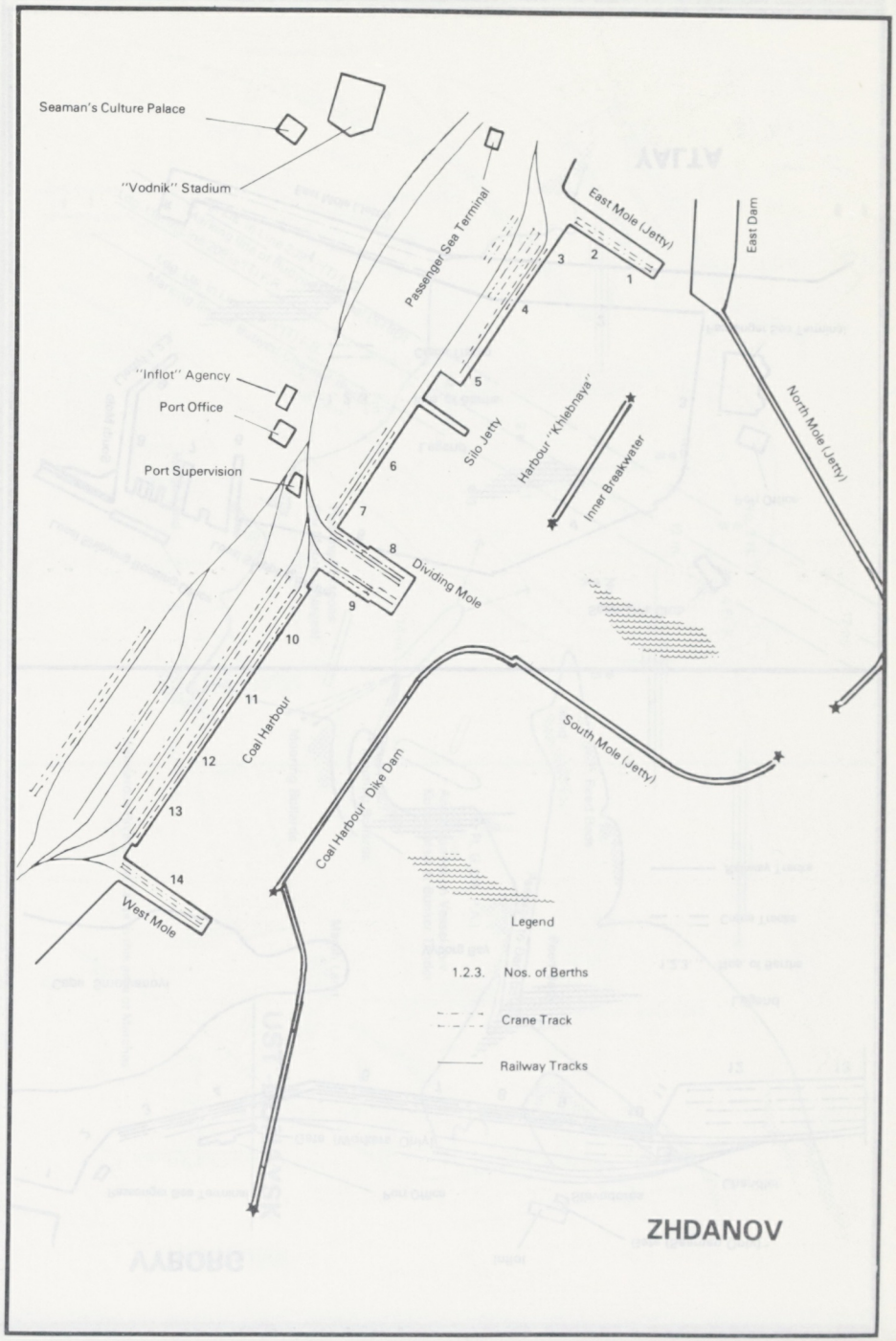
"Plan supplied by Ship's Master"



ABU-AL-BU-KHOOSH



1 Mooring Winches
2 Fenders: Yokohama (L = 9 m., Ø = 4.5 m.)
3 S.B.M
4 Hawsers (2 × Ø18 in.)
5 Producing Hoses (2 × 10 in.)
6 Loading Hoses (2 × 20 in.)
7 & 8 Flow Boom
9 Helideck



ZHDANOV

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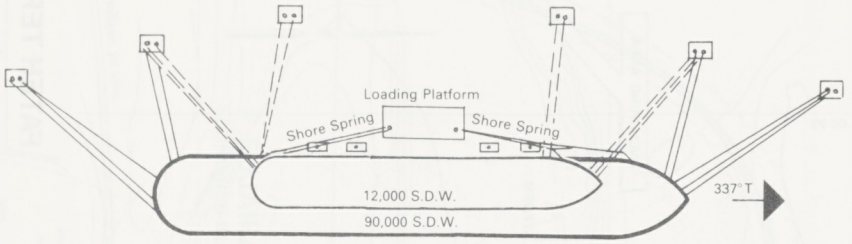
DAS ISLAND

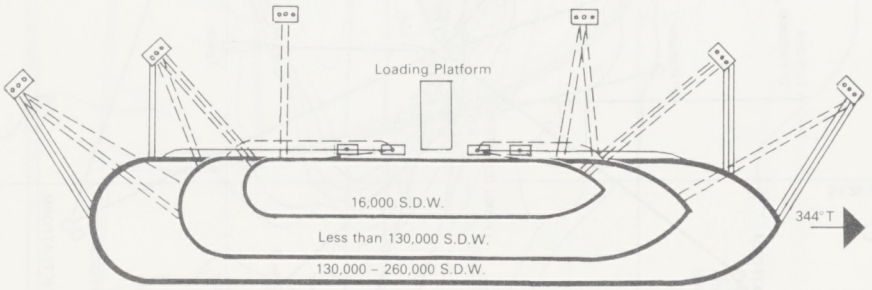
BERTH No. 1
MOORINGS



Minimum Moorings

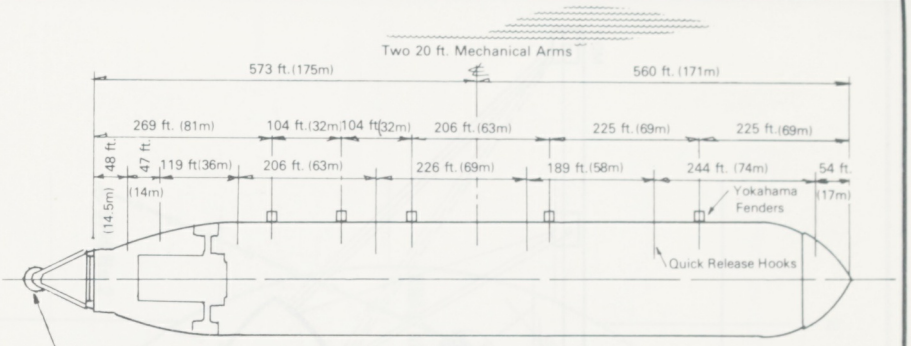
Forward: 3 Headlines, 2 Breastlines, 1 Spring
Aft: 3 Sternlines, 2 Breastlines, 1 Spring

BERTH No. 2
MOORINGS



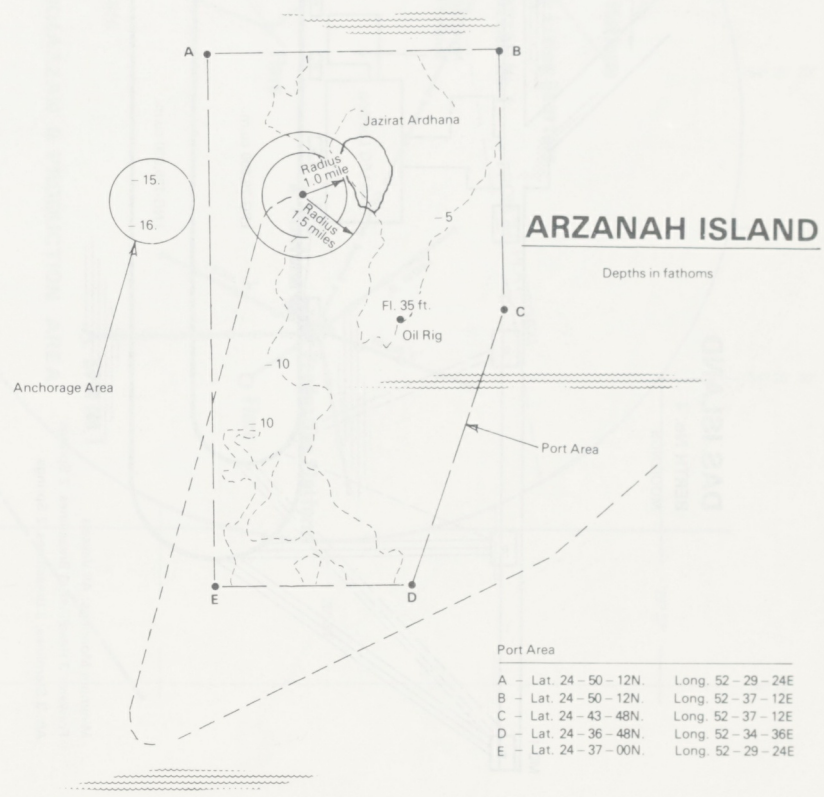
Vessels 16,000 – 130,000 S.D.W.
Minimum Moorings Required
Forward: 3 Headlines, 3 Breastlines, 1 Spring
Aft: 3 Sternlines, 2 Breastlines, 1 Spring

Vessels 130,000 – 260,000 S.D.W.
Minimum Moorings Required
Forward: 3 Headlines, 3 Breastlines, 1 Spring
Aft: 3 Sternlines, 2 Breastlines, 2 Springs



STORAGE TANKER 'TROPICAL LION'

L.O.A. – 1133 ft.
BEAM – 170 ft.
MOULDED DEPTH – 84 ft.



ARZANAH ISLAND

Depths in fathoms

Port Area

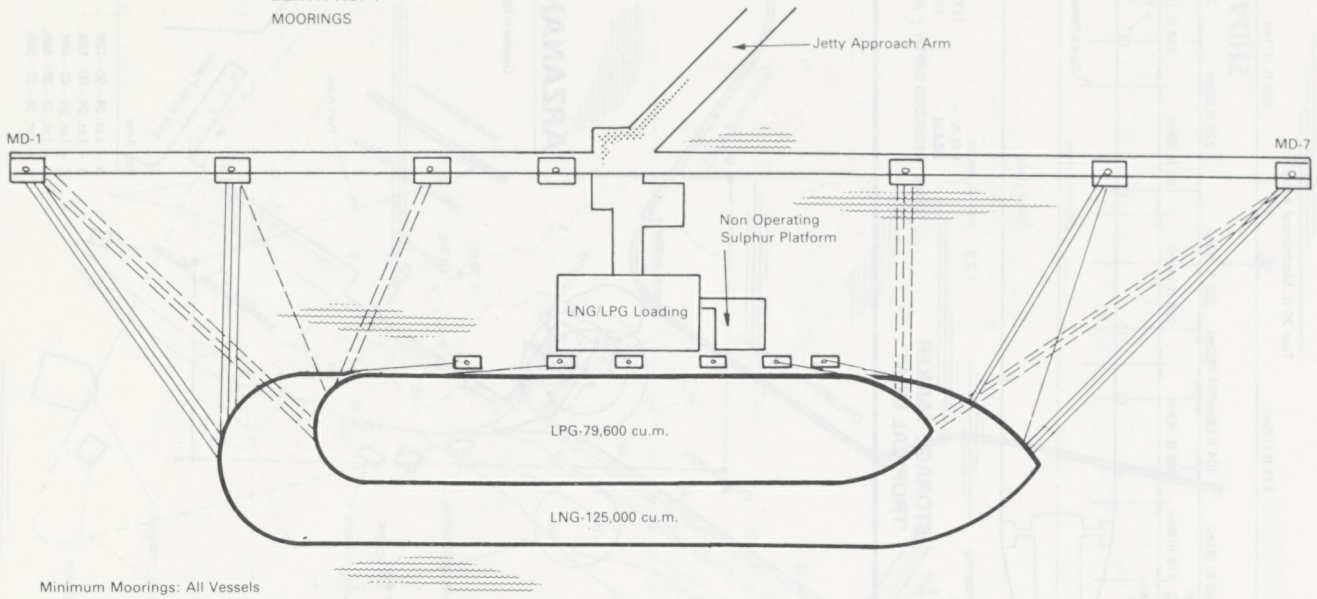
A –	Lat. 24 – 50 – 12N.	Long. 52 – 29 – 24E
B –	Lat. 24 – 50 – 12N.	Long. 52 – 37 – 12E
C –	Lat. 24 – 43 – 48N.	Long. 52 – 37 – 12E
D –	Lat. 24 – 36 – 48N.	Long. 52 – 34 – 36E
E –	Lat. 24 – 37 – 00N.	Long. 52 – 29 – 24E

"Plan supplied by Ship's Master"

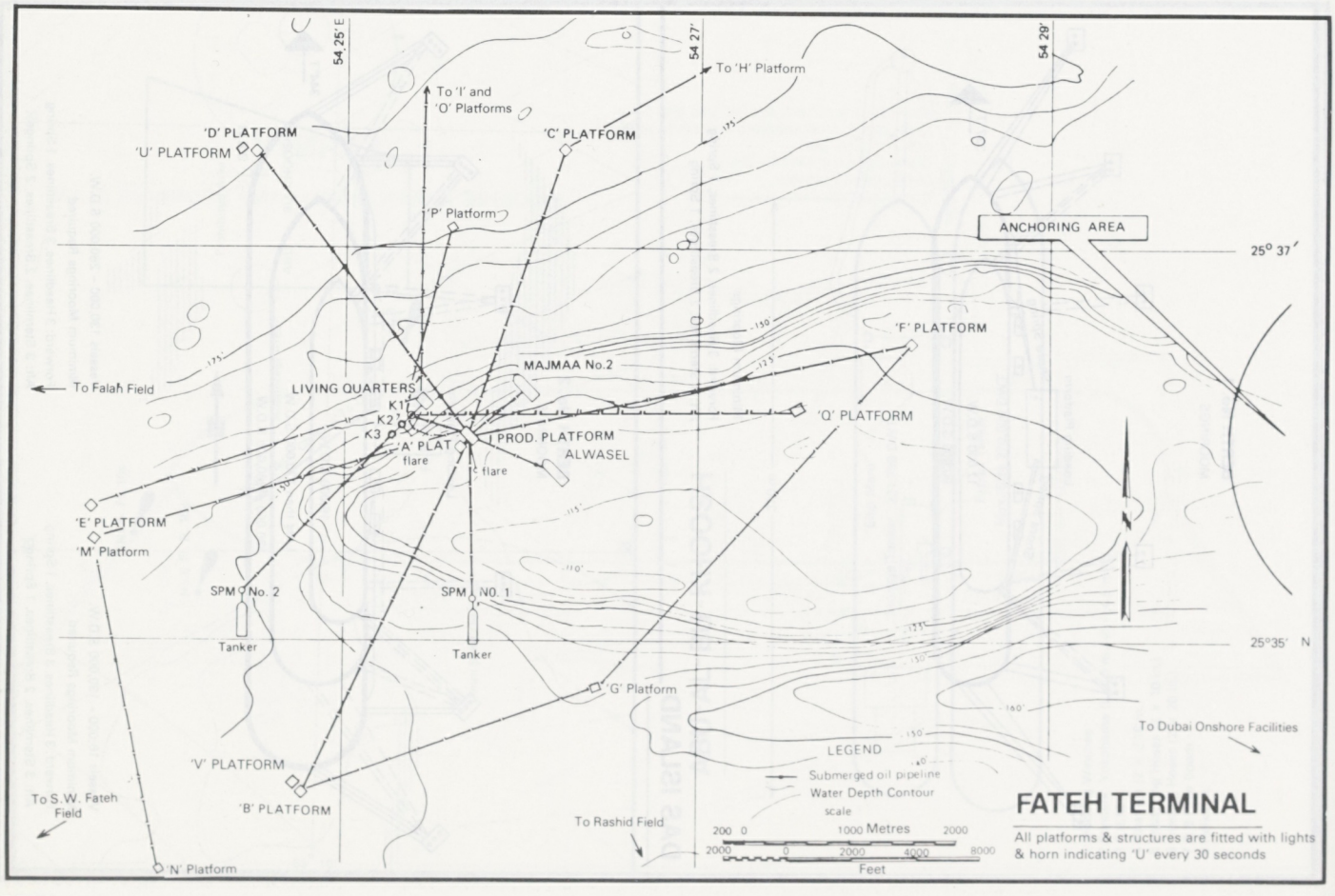
DAS ISLAND

BERTH No. 4

MOORINGS

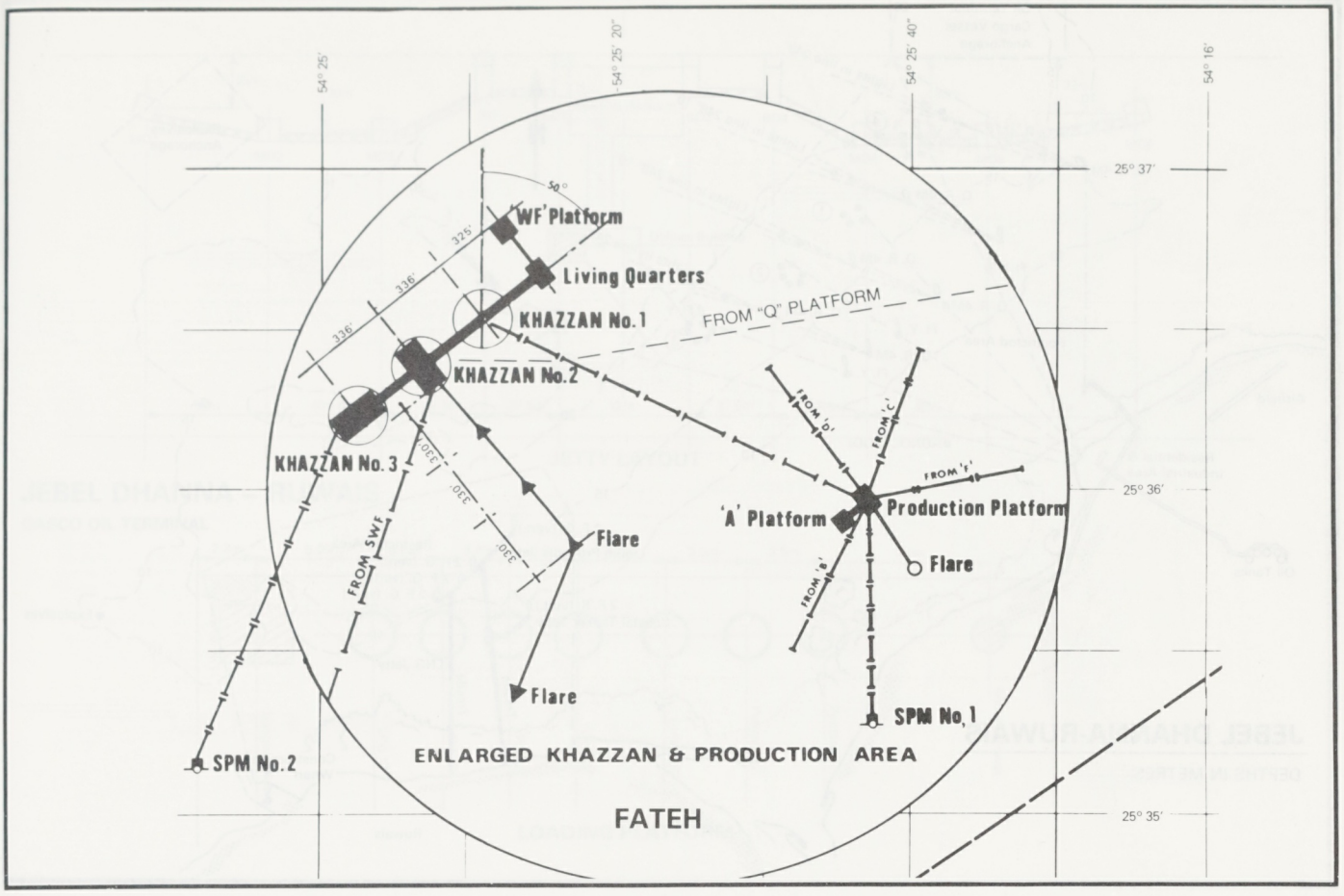


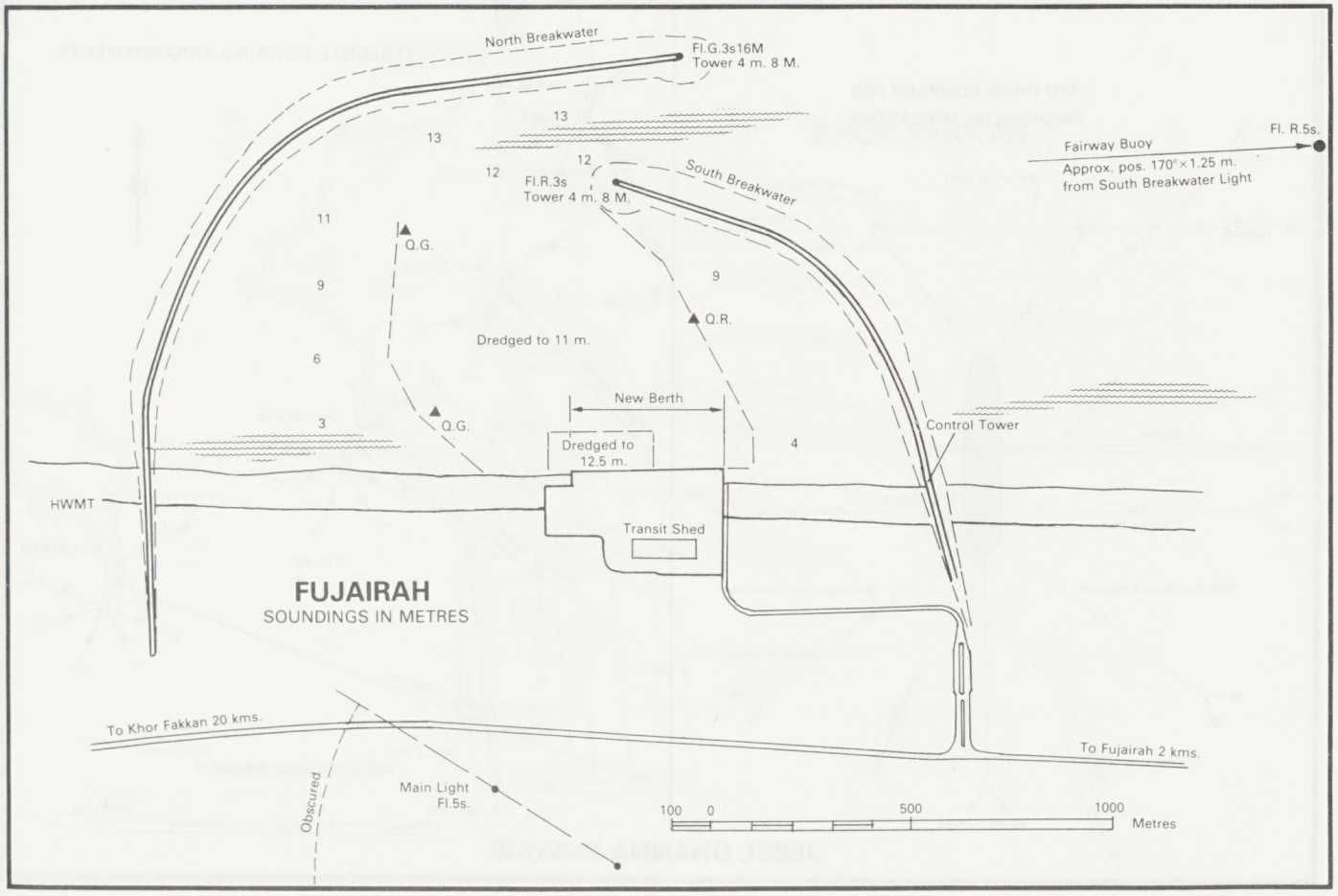
Minimum Moorings: All Vessels
Forward: 3 Headlines, 3 Breastlines, 2 Springs
Aft: 3 Sternlines, 3 Breastlines, 2 Springs

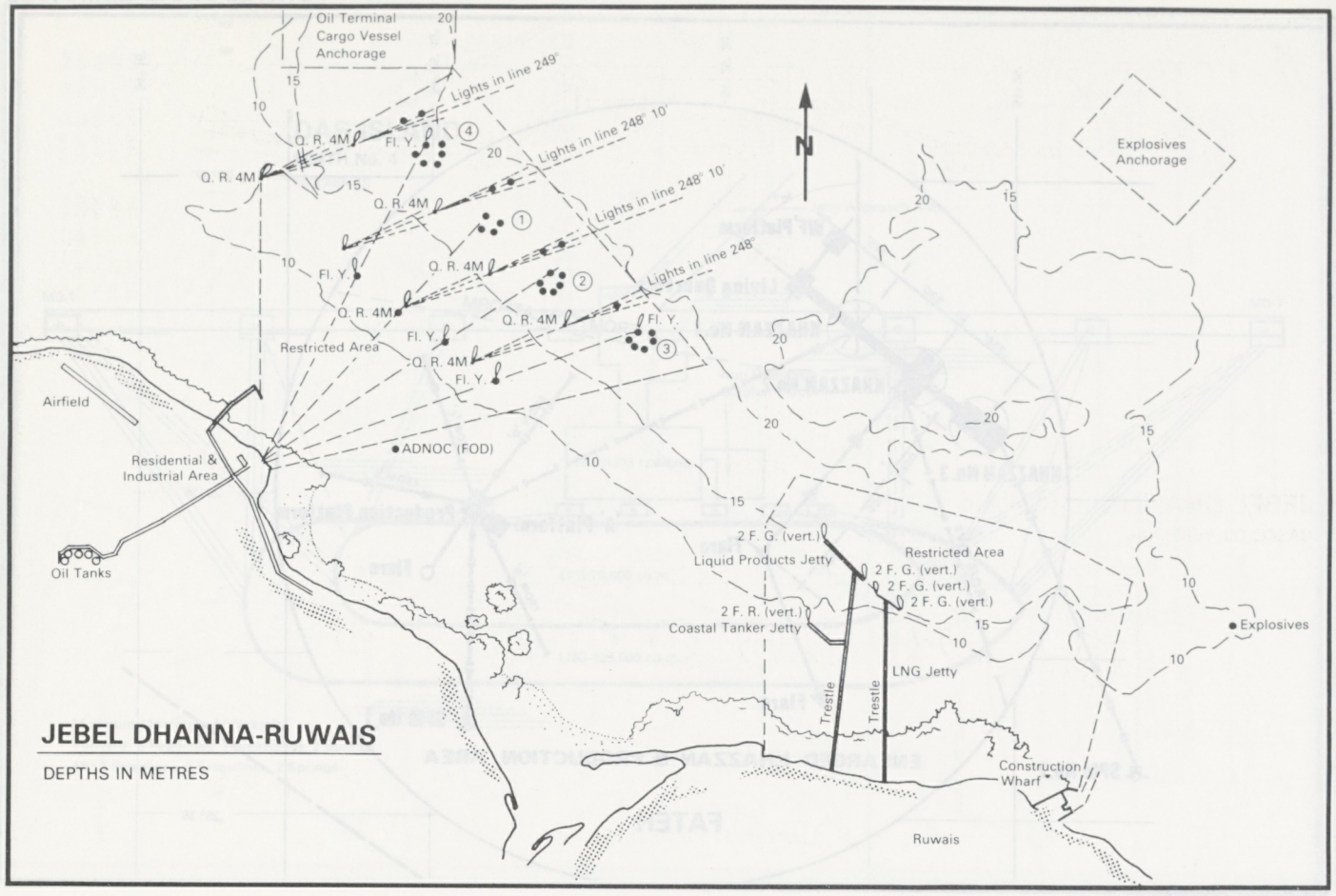


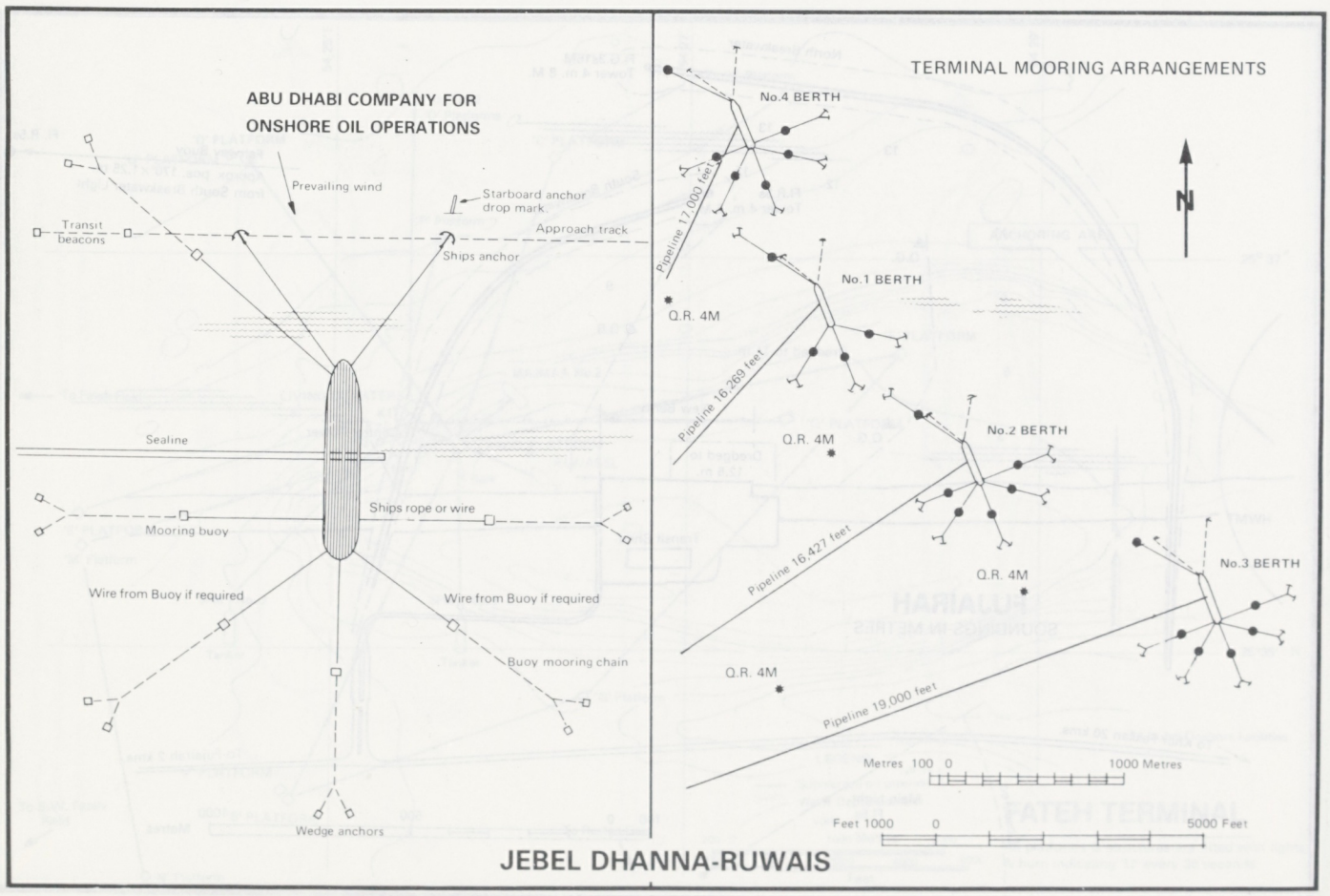
FATEH TERMINAL

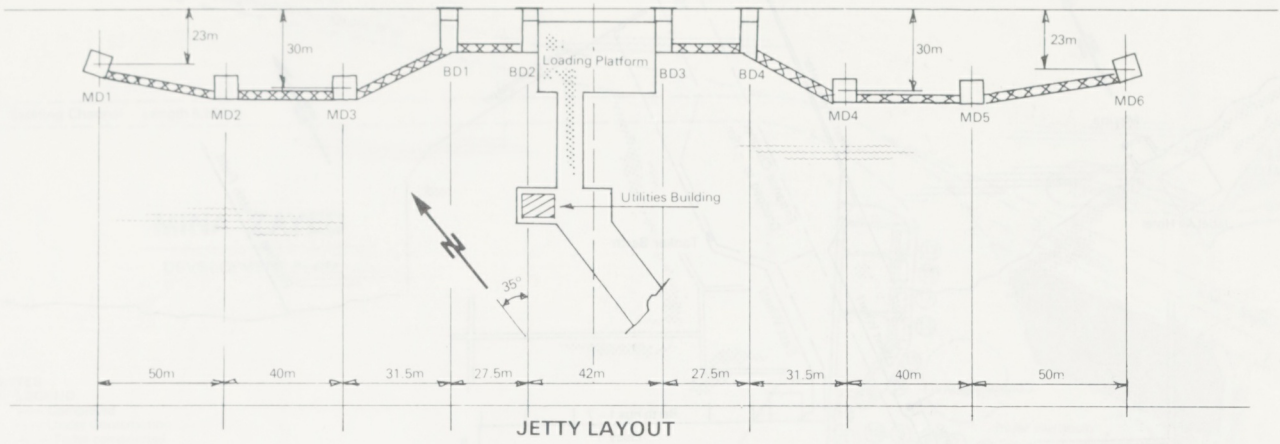
All platforms & structures are fitted with lights & horn indicating 'U' every 30 seconds


54° 25'
54° 25' 20"
54° 25' 40"
54° 16'
25° 37'
25° 36'
25° 35'
50°
'WF' Platform
325'
336'
336'
Living Quarters
KHAZZAN No.1
FROM "Q" PLATFORM
KHAZZAN No.2
KHAZZAN No.3
330'
330'
330'
FROM SWF
Flare
Flare
FROM 'D'
FROM 'C'
FROM 'E'
'A' Platform
Production Platform
Flare
FROM 'B'
SPM No.1
SPM No.2
ENLARGED KHAZZAN & PRODUCTION AREA
FATEH


North Breakwater
Fl.G.3s16M
Tower 4 m. 8 M.
13
13
12
12
Fl.R.3s
Tower 4 m. 8 M.
South Breakwater
Fairway Buoy
Approx. pos. 170°×1.25 m.
from South Breakwater Light
Fl. R.5s.
11
Q.G.
9
9
Q.R.
Dredged to 11 m.
6
New Berth
3
Q.G.
Dredged to
12.5 m.
4
Control Tower
HWMT
Transit Shed
FUJAIRAH
SOUNDINGS IN METRES
To Khor Fakkan 20 kms.
To Fujairah 2 kms.
Obscured
Main Light
Fl.5s.
100 0 500 1000
Metres


Oil Terminal
Cargo Vessel
Anchorage
Lights in line 249°
Lights in line 248° 10'
Lights in line 248° 10'
Lights in line 248°
Q. R. 4M
Fl. Y.
Restricted Area
Explosives
Anchorage
N
Airfield
ADNOC (FOD)
Residential &
Industrial Area
Oil Tanks
2 F. G. (vert.)
Liquid Products Jetty
Restricted Area
2 F. G. (vert.)
2 F. G. (vert.)
2 F. G. (vert.)
2 F. R. (vert.)
Coastal Tanker Jetty
LNG Jetty
Trestle
Trestle
Explosives
Construction
Wharf
Ruwais
JEBEL DHANNA-RUWAIS
DEPTHS IN METRES

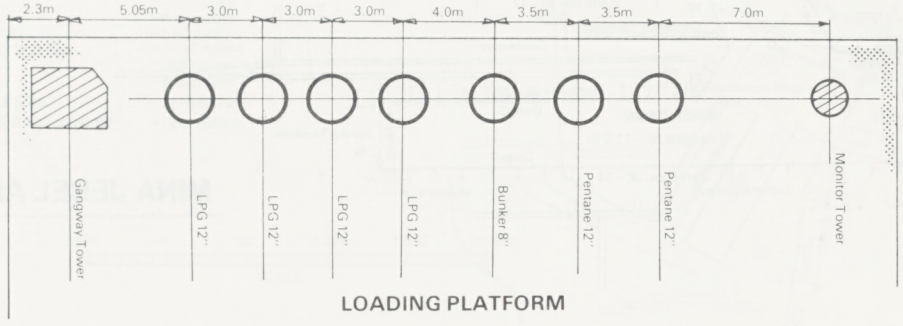

ABU DHABI COMPANY FOR
ONSHORE OIL OPERATIONS
Prevailing wind
Starboard anchor
drop mark
Approach track
Transit
beacons
Ships anchor
Sealine
Ships rope or wire
Mooring buoy
Wire from Buoy if required
Wire from Buoy if required
Buoy mooring chain
Wedge anchors
TERMINAL MOORING ARRANGEMENTS
No.4 BERTH
Pipeline 17,000 feet
N
No.1 BERTH
Q.R. 4M
Pipeline 16,269 feet
No.2 BERTH
Q.R. 4M
Pipeline 16,427 feet
No.3 BERTH
Q.R. 4M
Q.R. 4M
Pipeline 19,000 feet
Metres 100 0 1000 Metres
Feet 1000 0 5000 Feet
JEBEL DHANNA-RUWAIS



JETTY LAYOUT

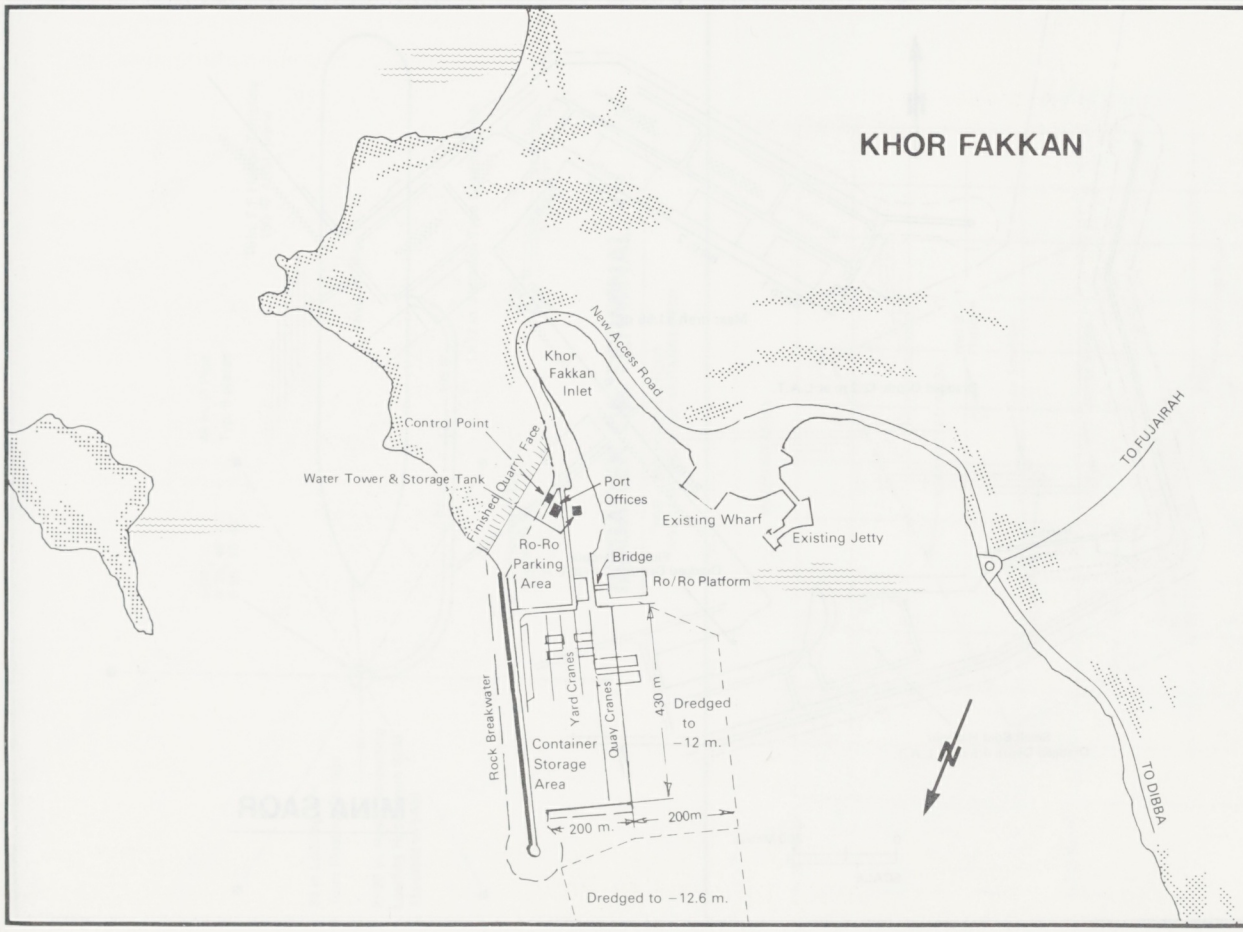
JEBEL DHANNA – RUWAIS

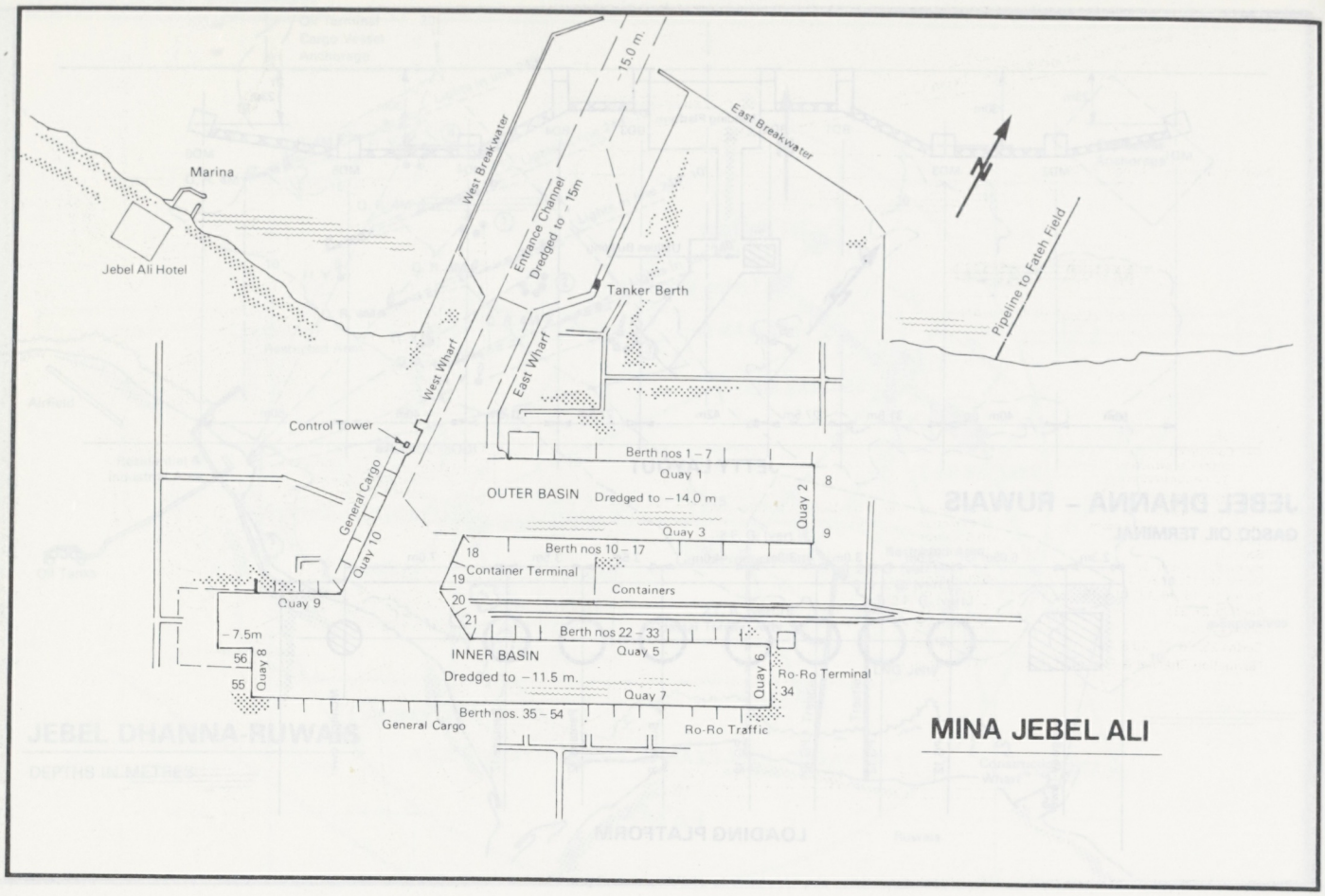
GASCO OIL TERMINAL

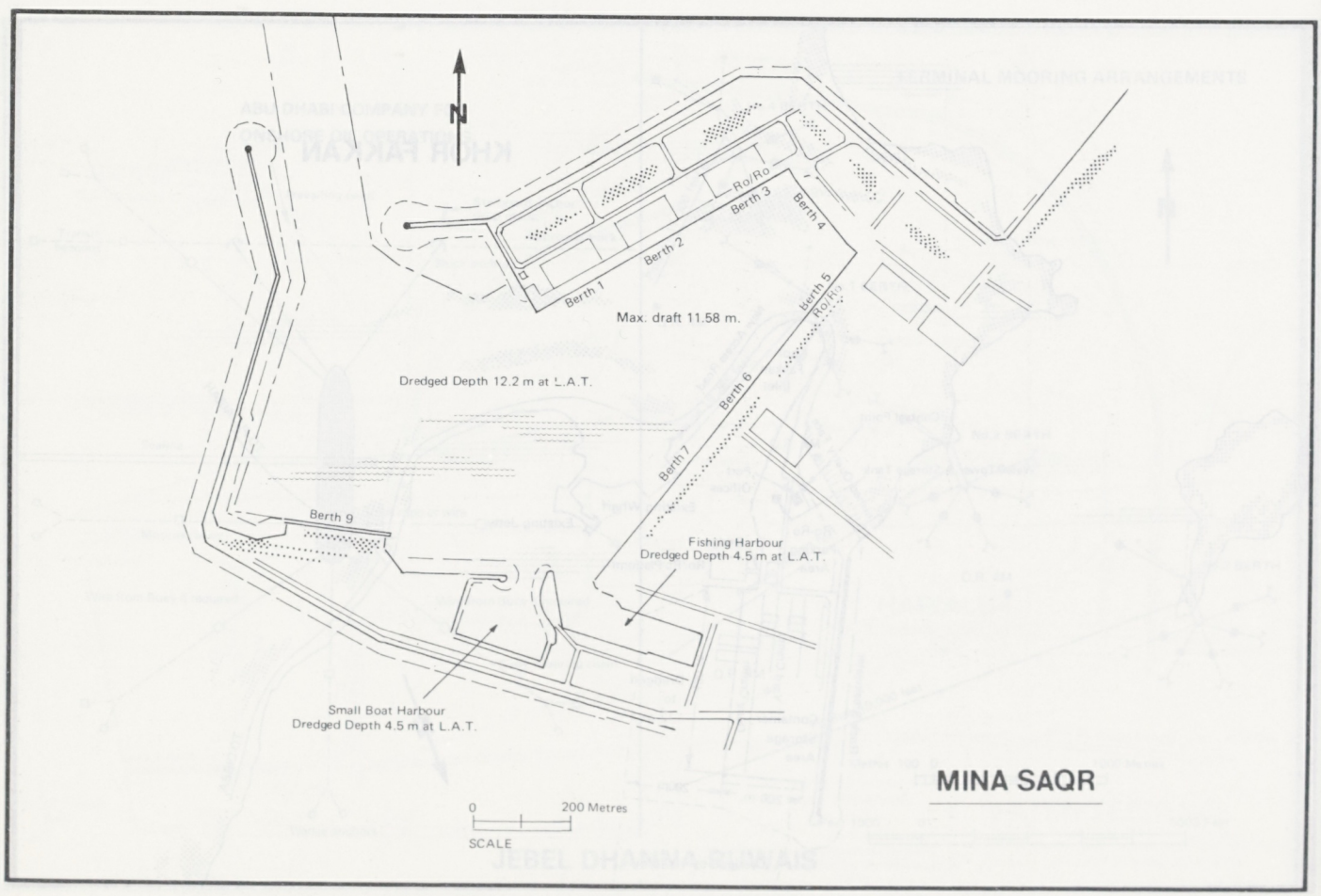


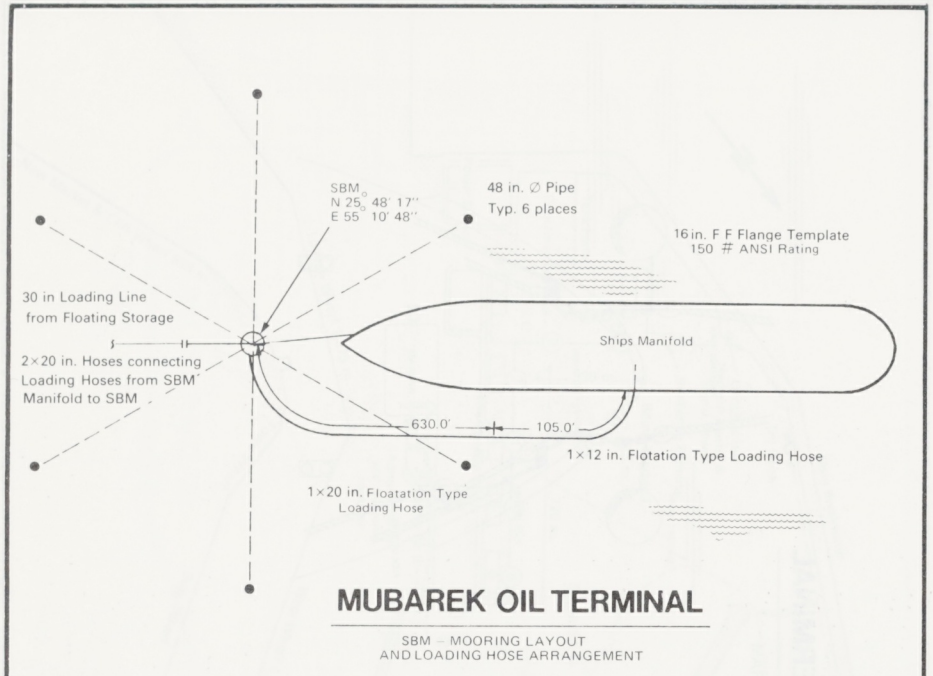
LOADING PLATFORM

KHOR FAKKAN



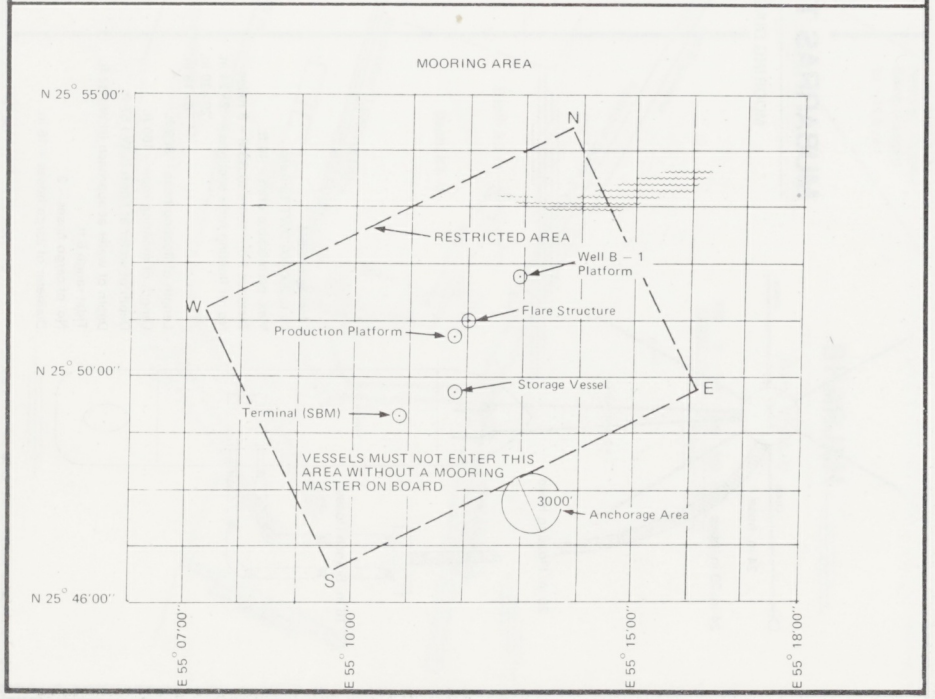

Marina
Jebel Ali Hotel
West Breakwater
-15.0 m.
East Breakwater
Entrance Channel
Dredged to -15m
Tanker Berth
Pipeline to Fateh Field
West Wharf
East Wharf
Control Tower
General Cargo
Quay 10
Berth nos 1 – 7
Quay 1
OUTER BASIN Dredged to -14.0 m
Quay 2
Quay 3
8
9
18
19
20
21
Berth nos 10 – 17
Container Terminal
Containers
Quay 9
-7.5m
56
55
Quay 8
Berth nos 22 – 33
Quay 5
INNER BASIN
Dredged to -11.5 m.
Quay 6
Ro-Ro Terminal
34
Quay 7
Berth nos. 35 – 54
General Cargo
Ro-Ro Traffic
MINA JEBEL ALI

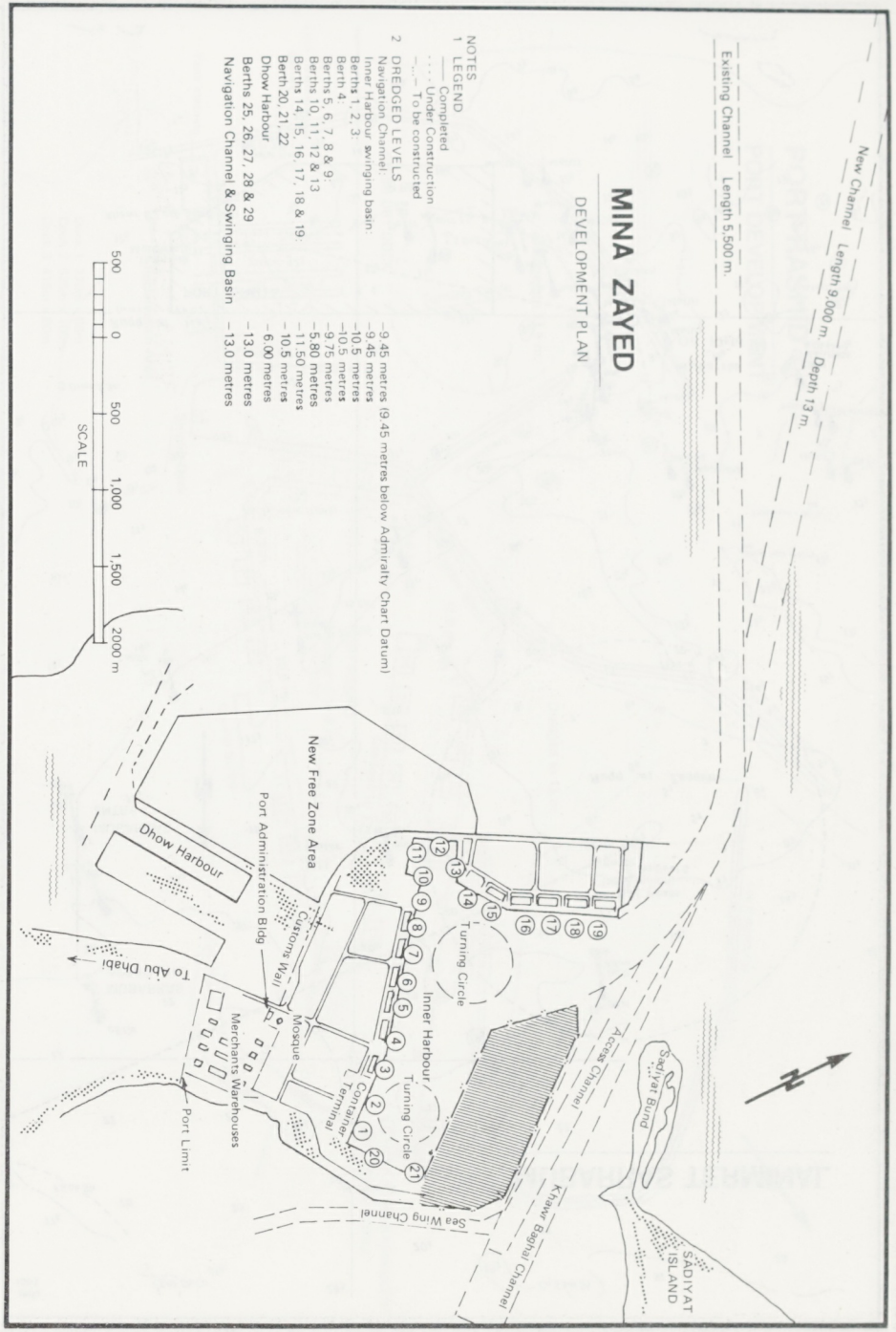

Ro/Ro
Berth 3
Berth 4
Berth 2
Berth 1
Berth 5
Ro/Ro
Max. draft 11.58 m.
Dredged Depth 12.2 m at L.A.T.
Berth 6
Berth 7
Berth 9
Fishing Harbour
Dredged Depth 4.5 m at L.A.T.
Small Boat Harbour
Dredged Depth 4.5 m at L.A.T.
0
200 Metres
SCALE
MINA SAQR



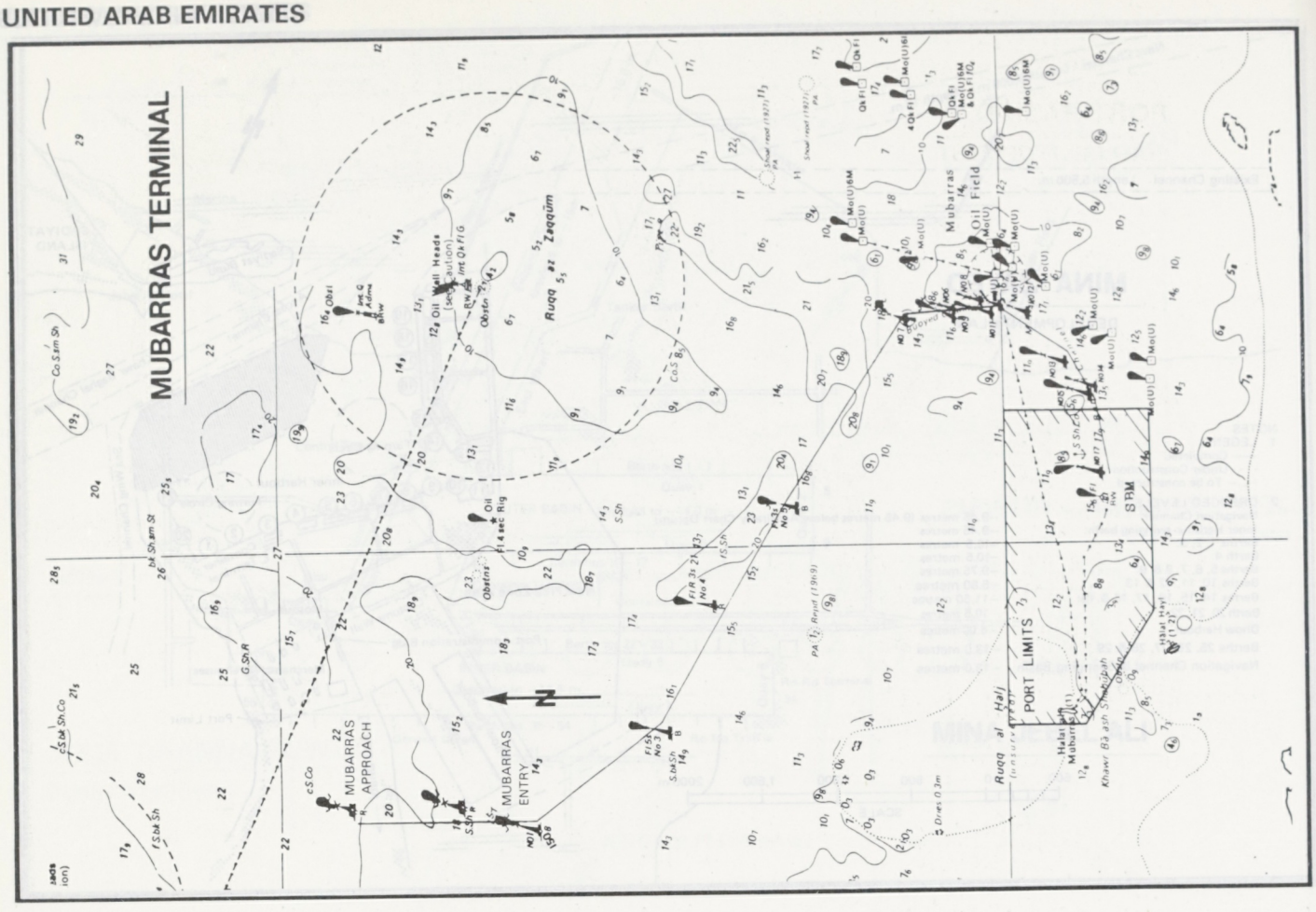
MUBAREK OIL TERMINAL

SBM – MOORING LAYOUT
AND LOADING HOSE ARRANGEMENT



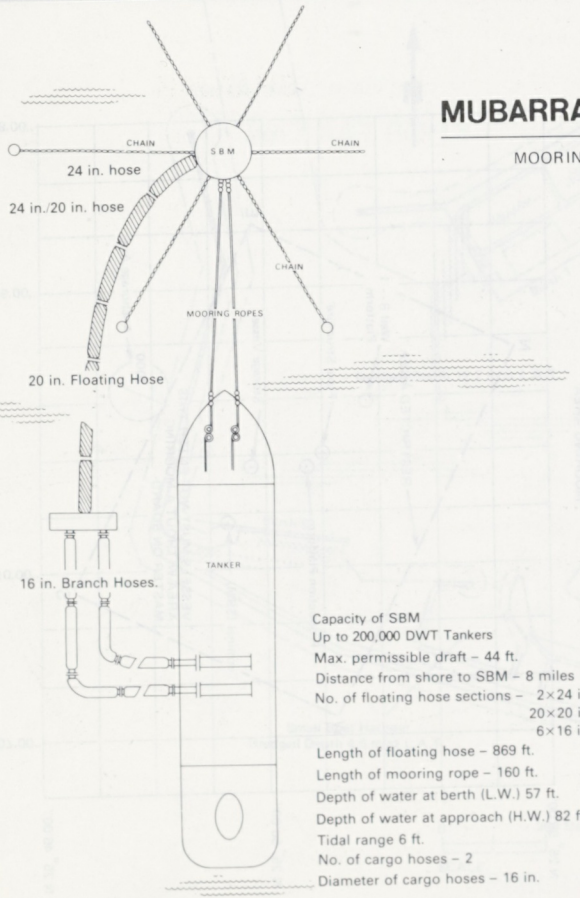


UNITED ARAB EMIRATES

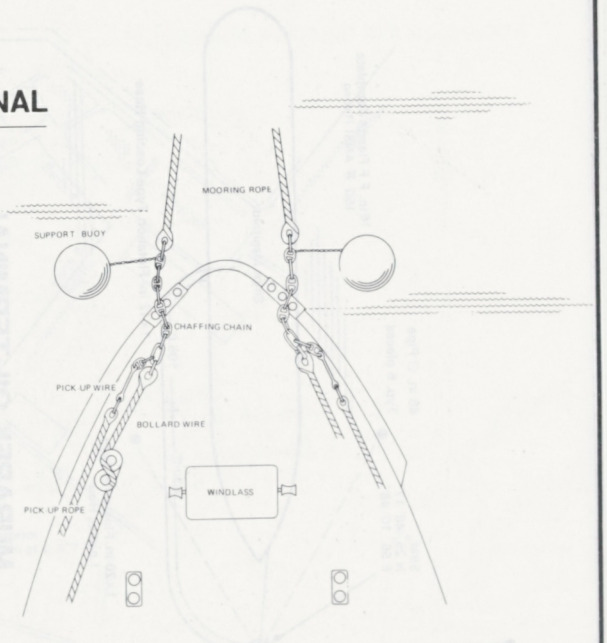


MUBARRAS TERMINAL

MOORING DIAGRAM

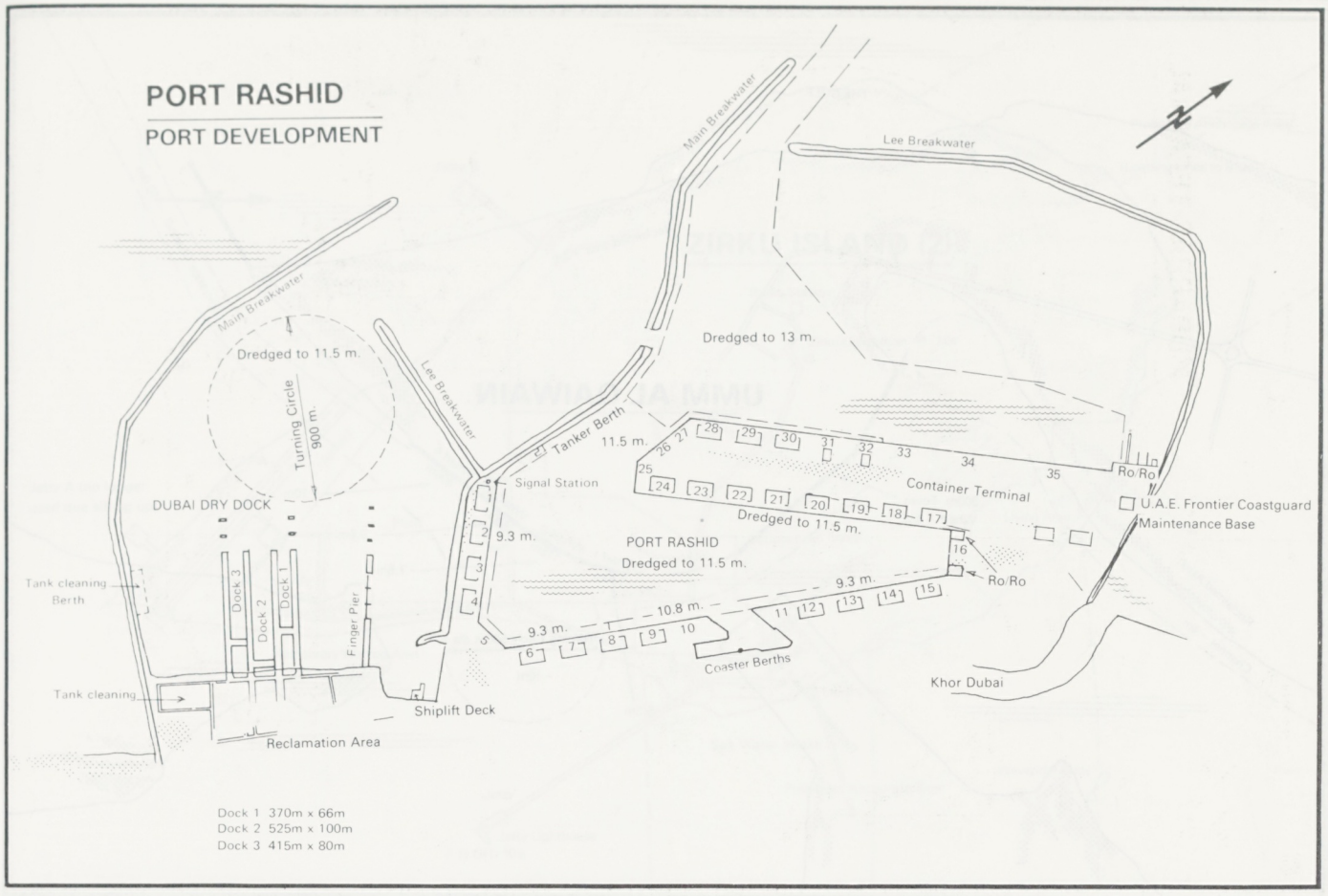


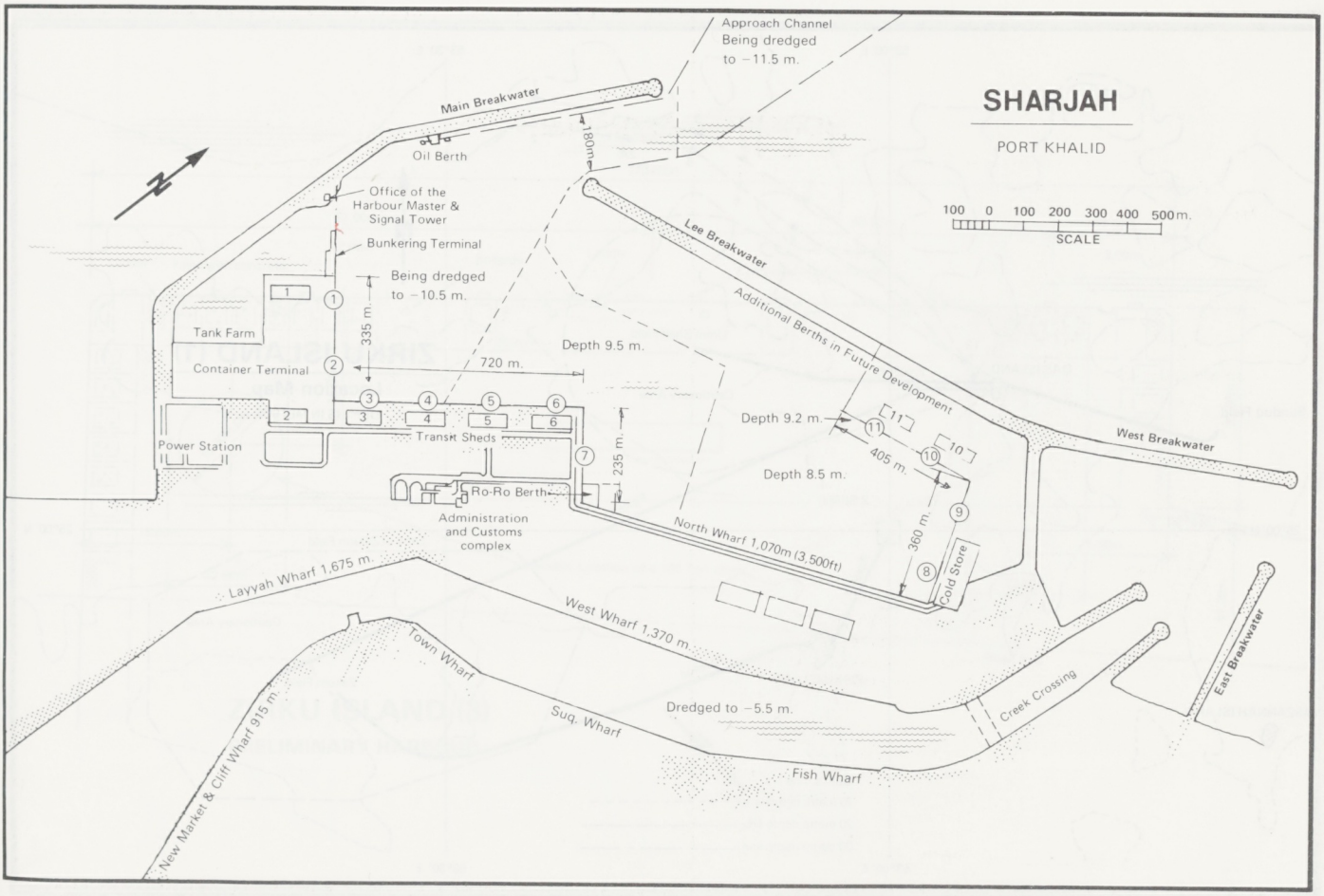
Capacity of SBM
Up to 200,000 DWT Tankers
Max. permissible draft – 44 ft.
Distance from shore to SBM – 8 miles
No. of floating hose sections – 2×24 in.
20×20 in.
6×16 in.
Length of floating hose – 869 ft.
Length of mooring rope – 160 ft.
Depth of water at berth (L.W.) 57 ft.
Depth of water at approach (H.W.) 82 ft.
Tidal range 6 ft.
No. of cargo hoses – 2
Diameter of cargo hoses – 16 in.

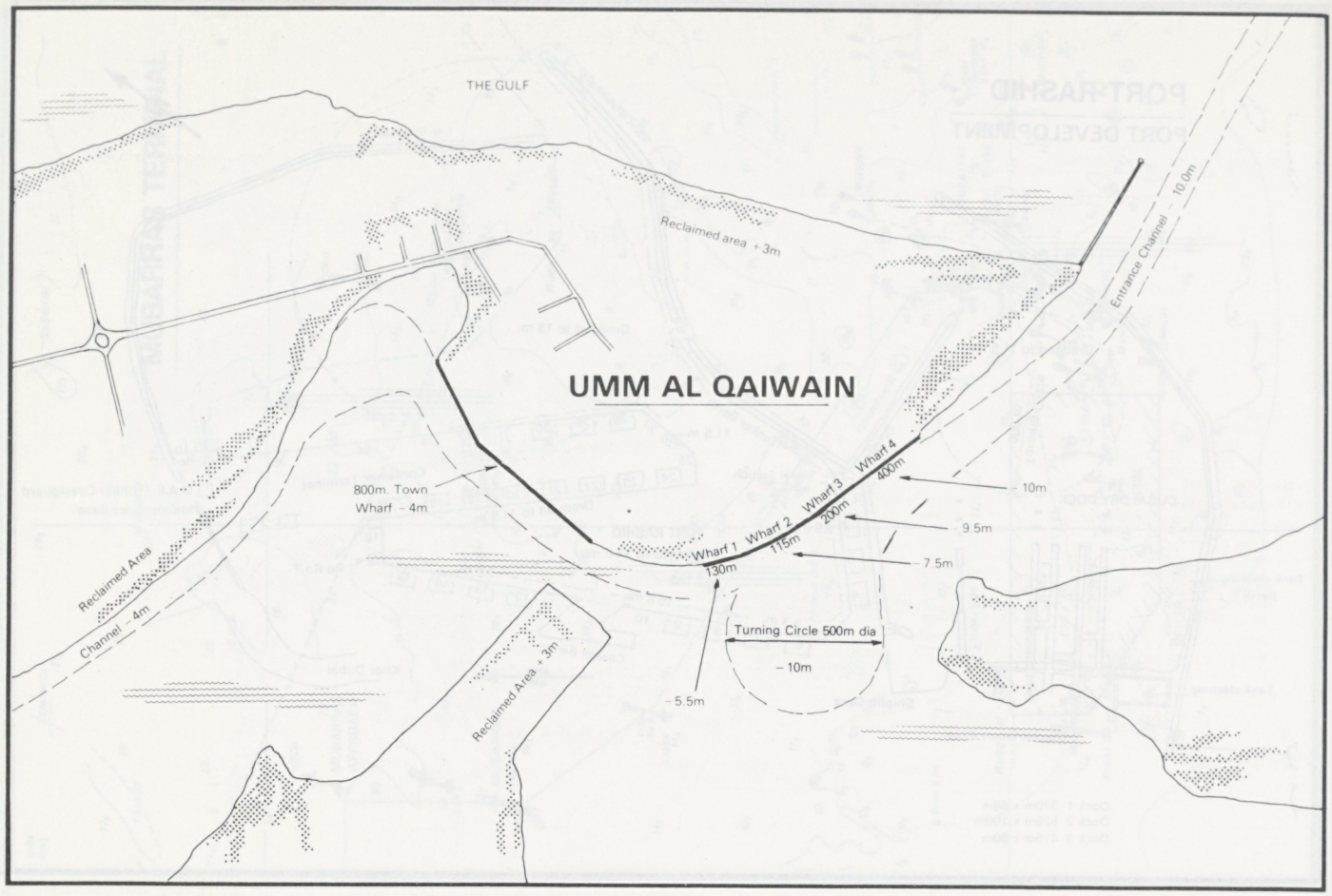


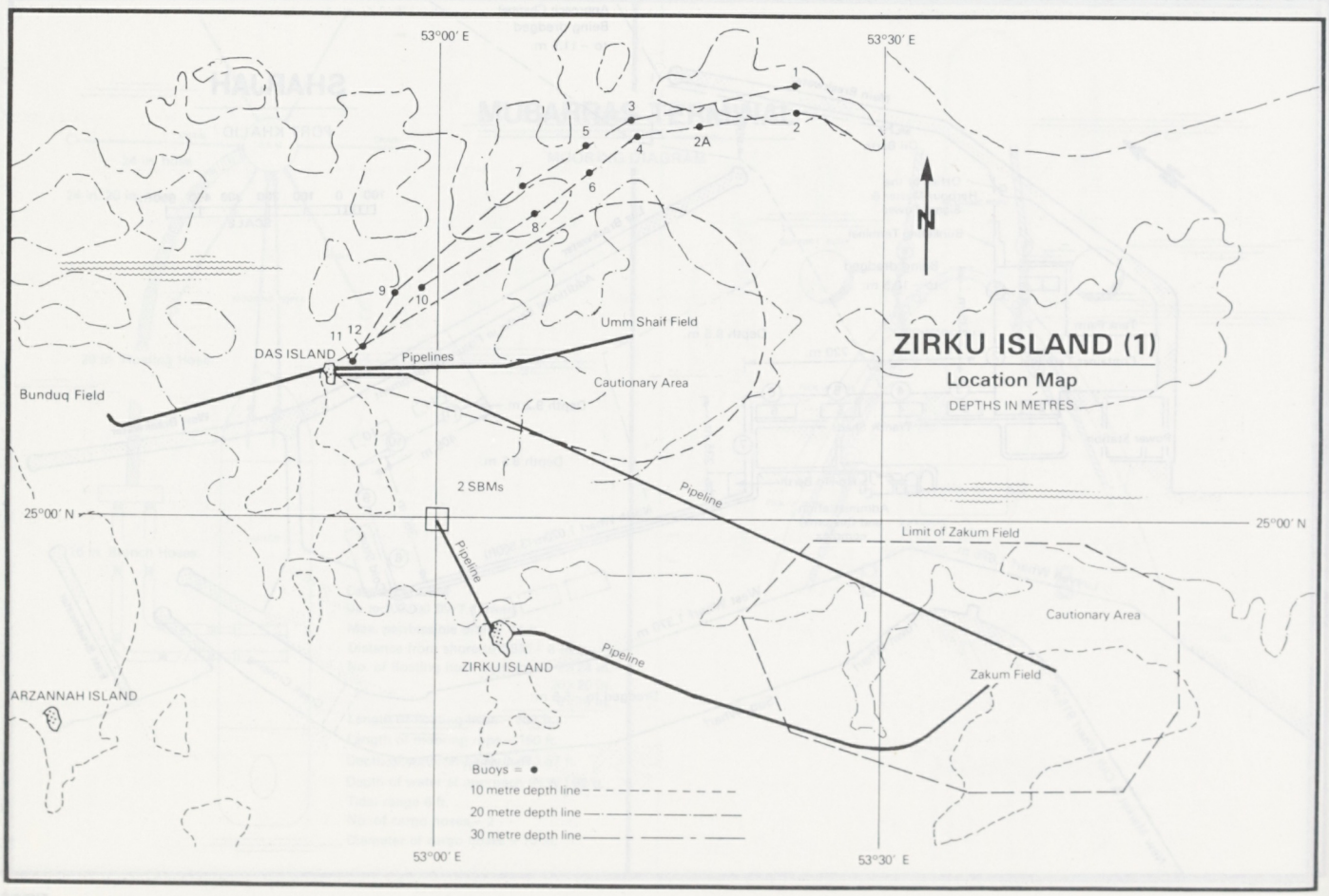
PORT RASHID

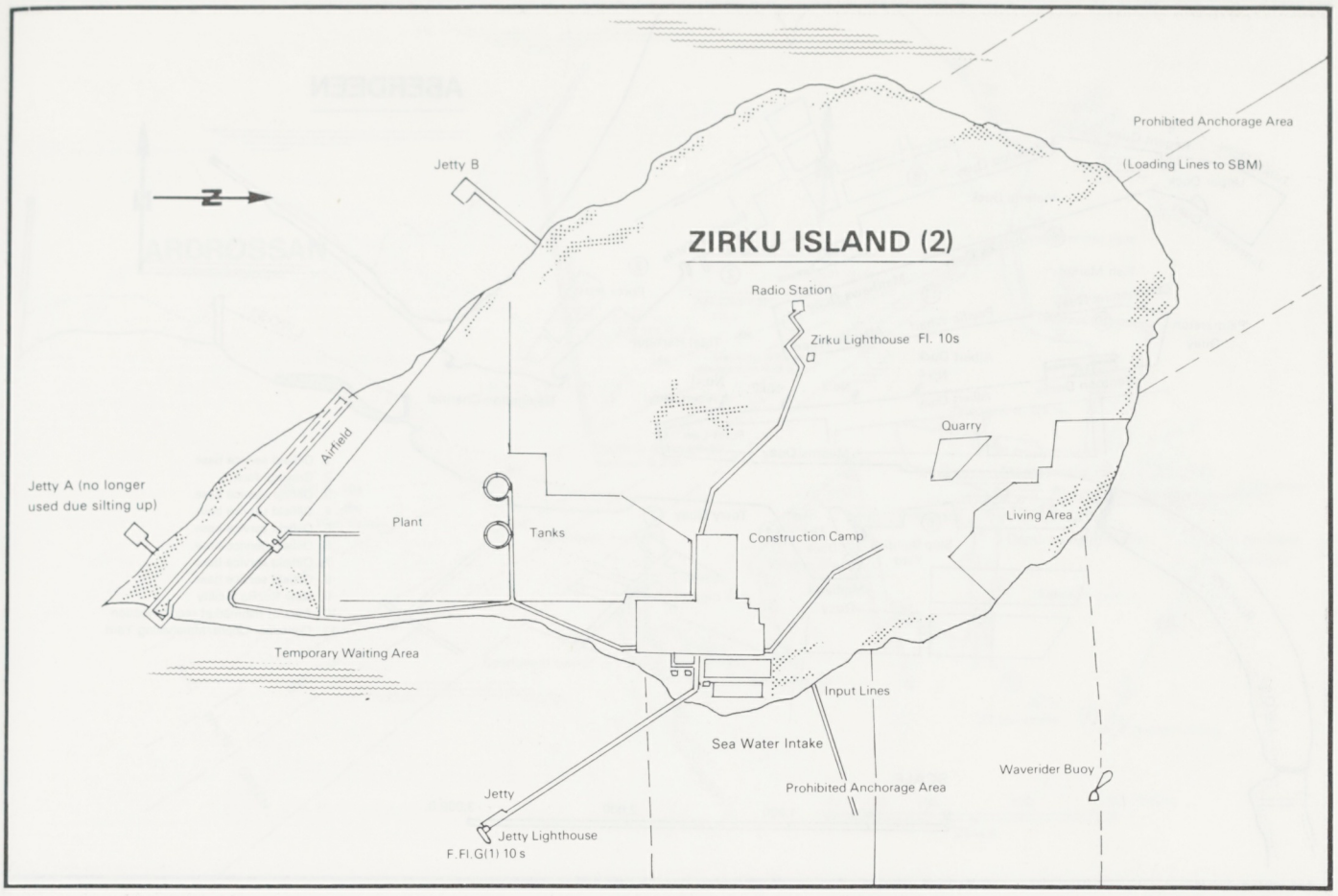
PORT DEVELOPMENT

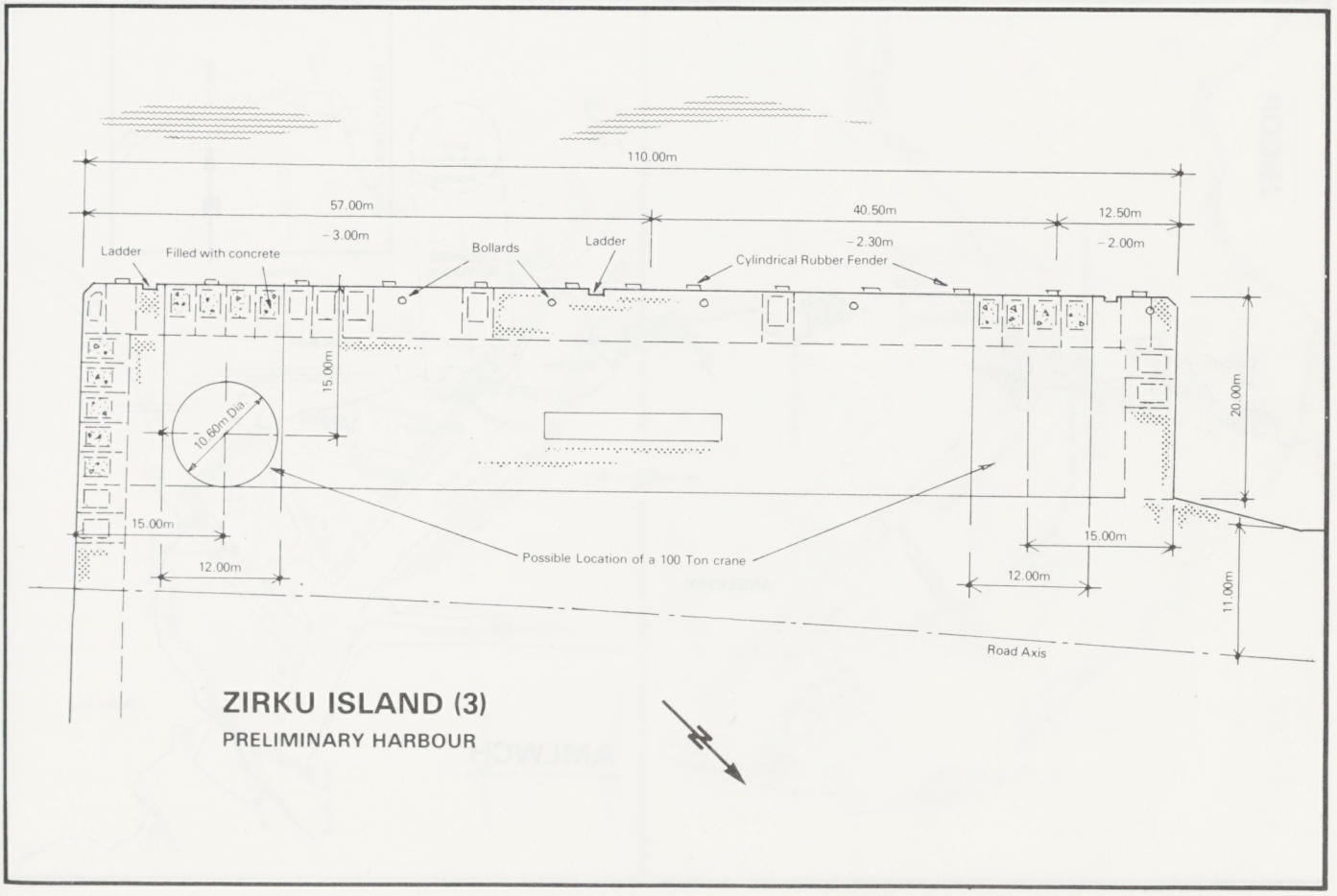


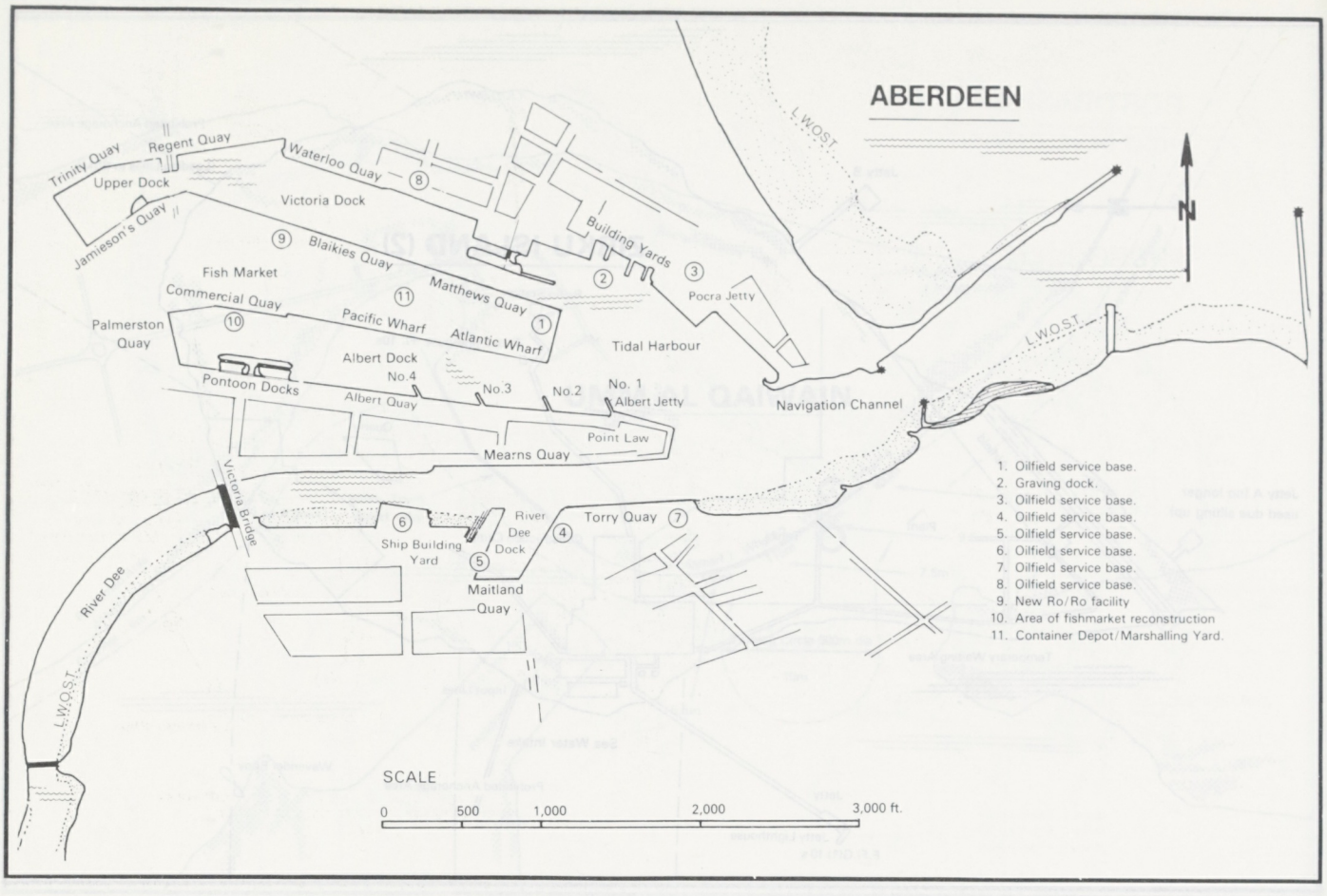


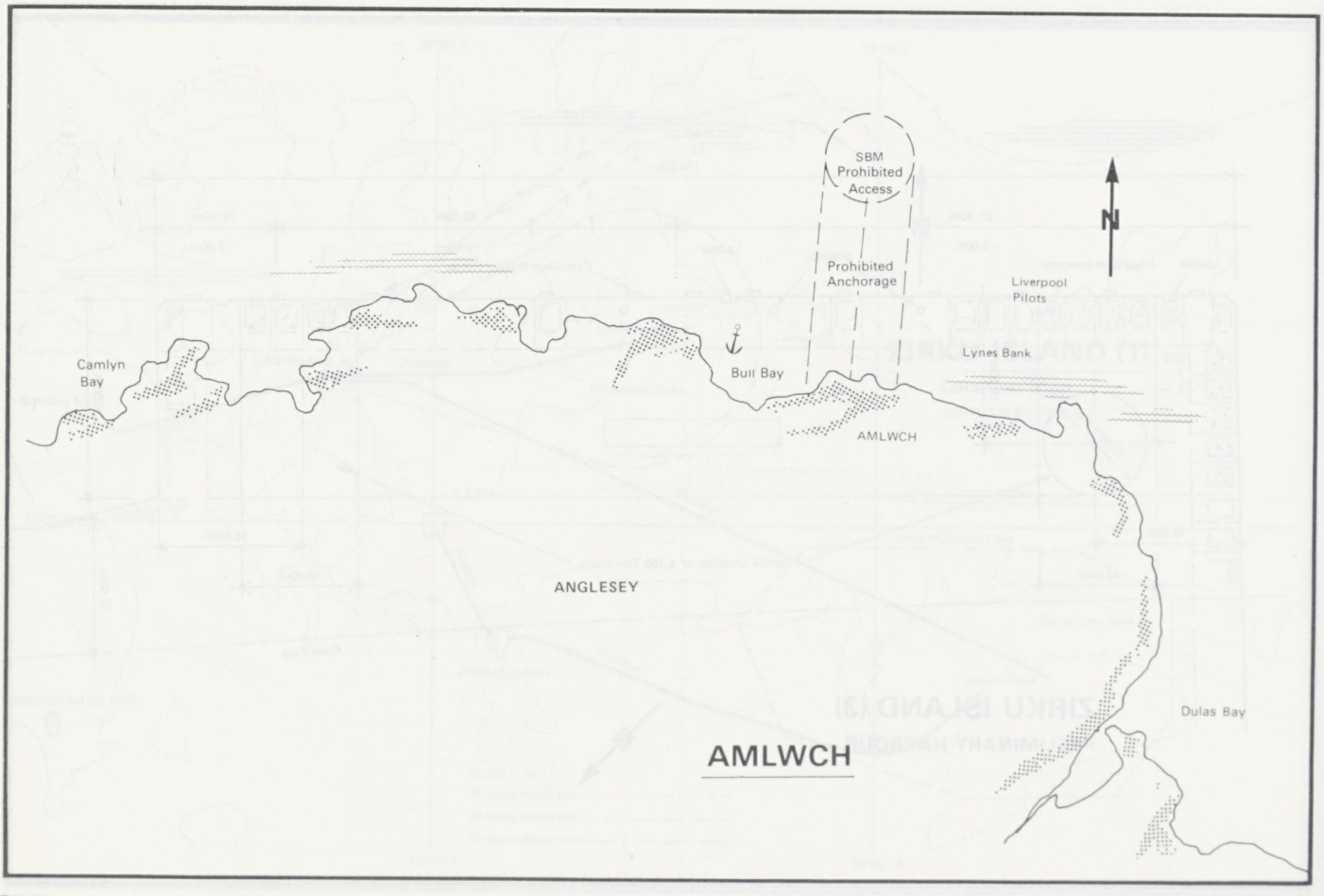

THE GULF
Reclaimed area + 3m
Entrance Channel – 10.0m
UMM AL QAIWAIN
800m. Town Wharf – 4m
Wharf 1 130m
Wharf 2 115m
Wharf 3 200m
Wharf 4 400m
– 10m
– 9.5m
– 7.5m
Turning Circle 500m dia
– 10m
– 5.5m
Reclaimed Area
Channel – 4m
Reclaimed Area + 3m

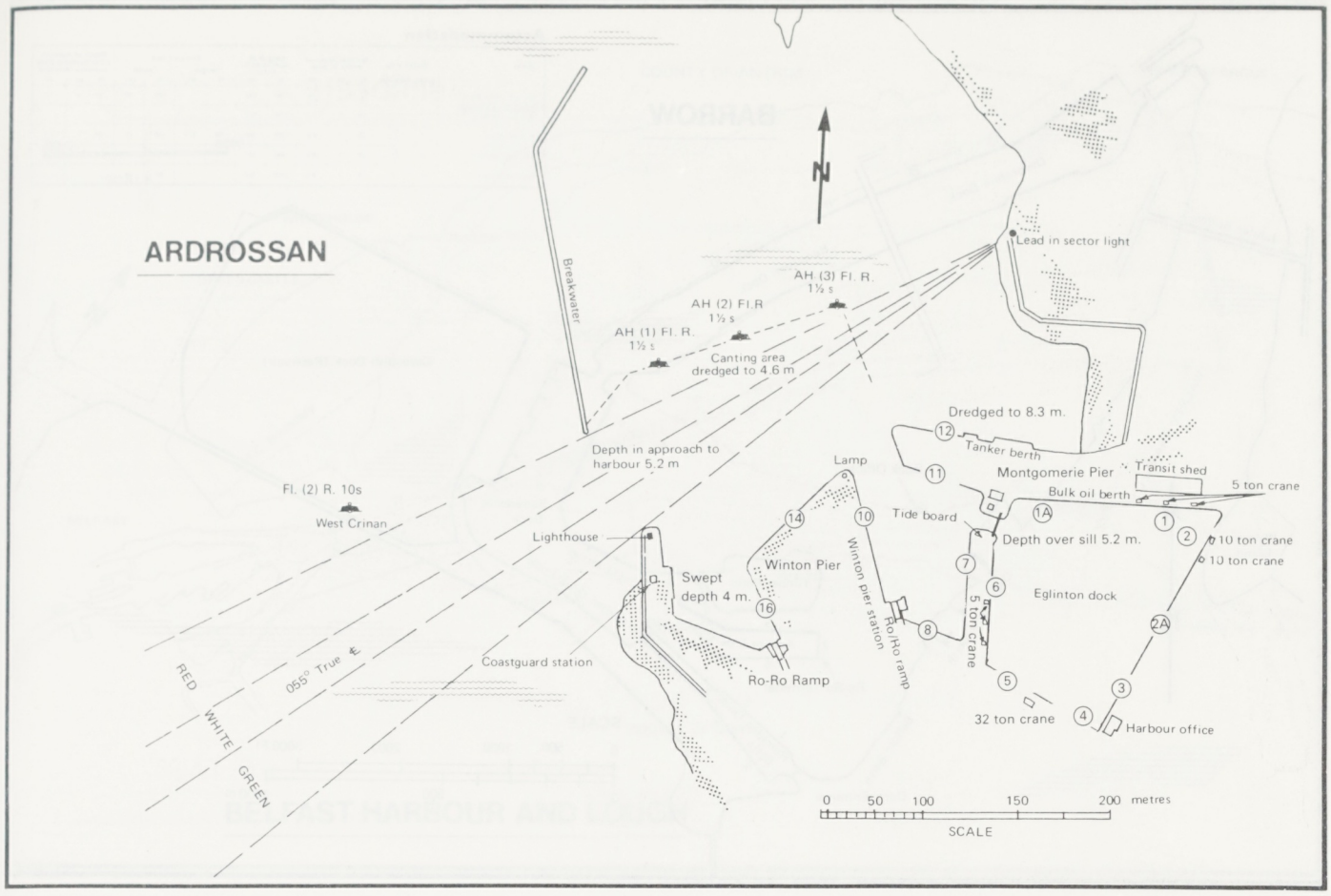

53°00′ E
53°30′ E
ZIRKU ISLAND (1)
Location Map
DEPTHS IN METRES
N
DAS ISLAND
Pipelines
Umm Shaif Field
Cautionary Area
Bunduq Field
2 SBMs
Pipeline
25°00′ N
Limit of Zakum Field
ZIRKU ISLAND
ARZANNAH ISLAND
Zakum Field
Buoys = ●
10 metre depth line
20 metre depth line
30 metre depth line

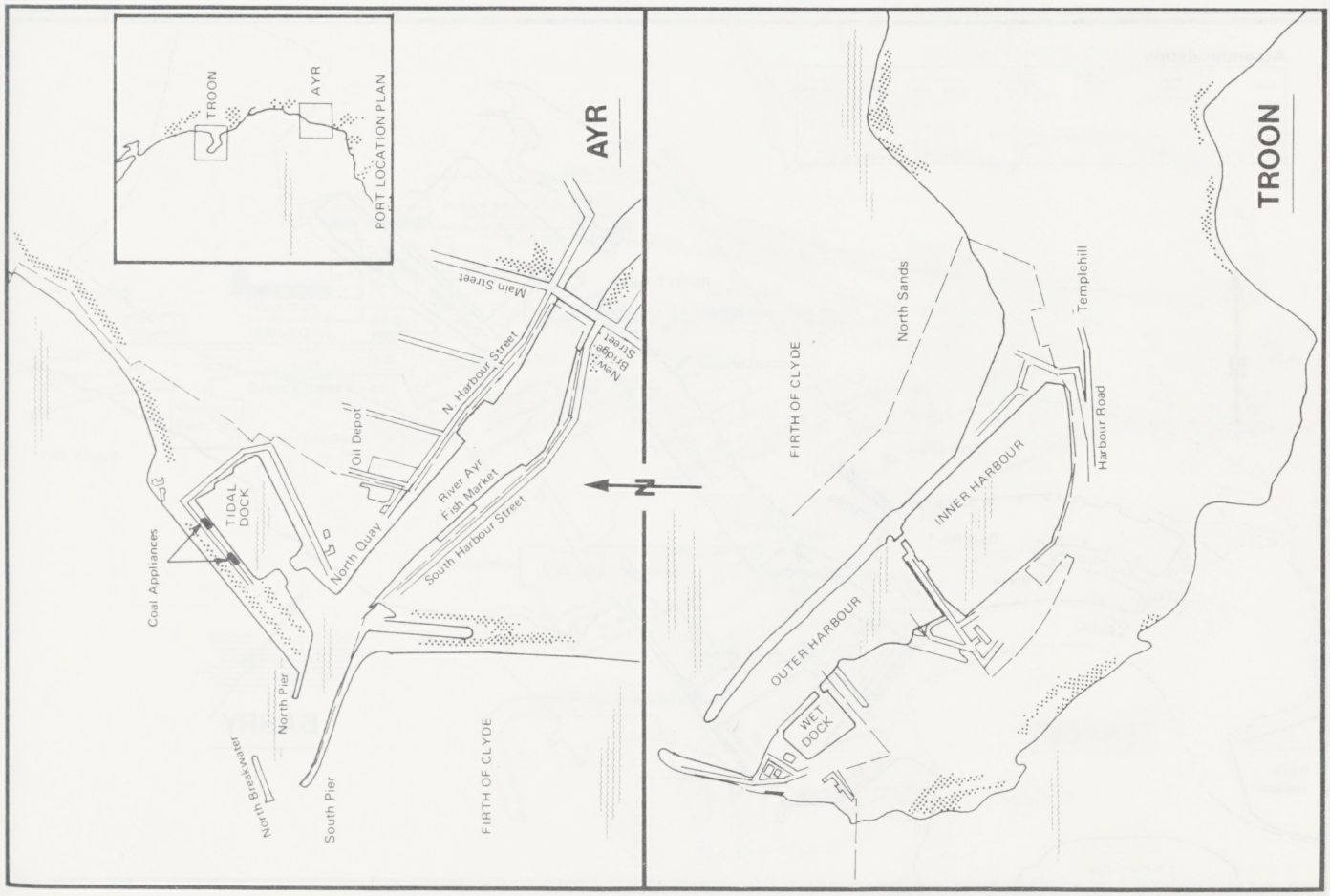

Prohibited Anchorage Area
(Loading Lines to SBM)
Jetty B
N
ZIRKU ISLAND (2)
Radio Station
Zirku Lighthouse Fl. 10s
Quarry
Airfield
Jetty A (no longer used due silting up)
Plant
Tanks
Construction Camp
Living Area
Temporary Waiting Area
Input Lines
Sea Water Intake
Waverider Buoy
Prohibited Anchorage Area
Jetty
Jetty Lighthouse
F.Fl.G(1) 10 s

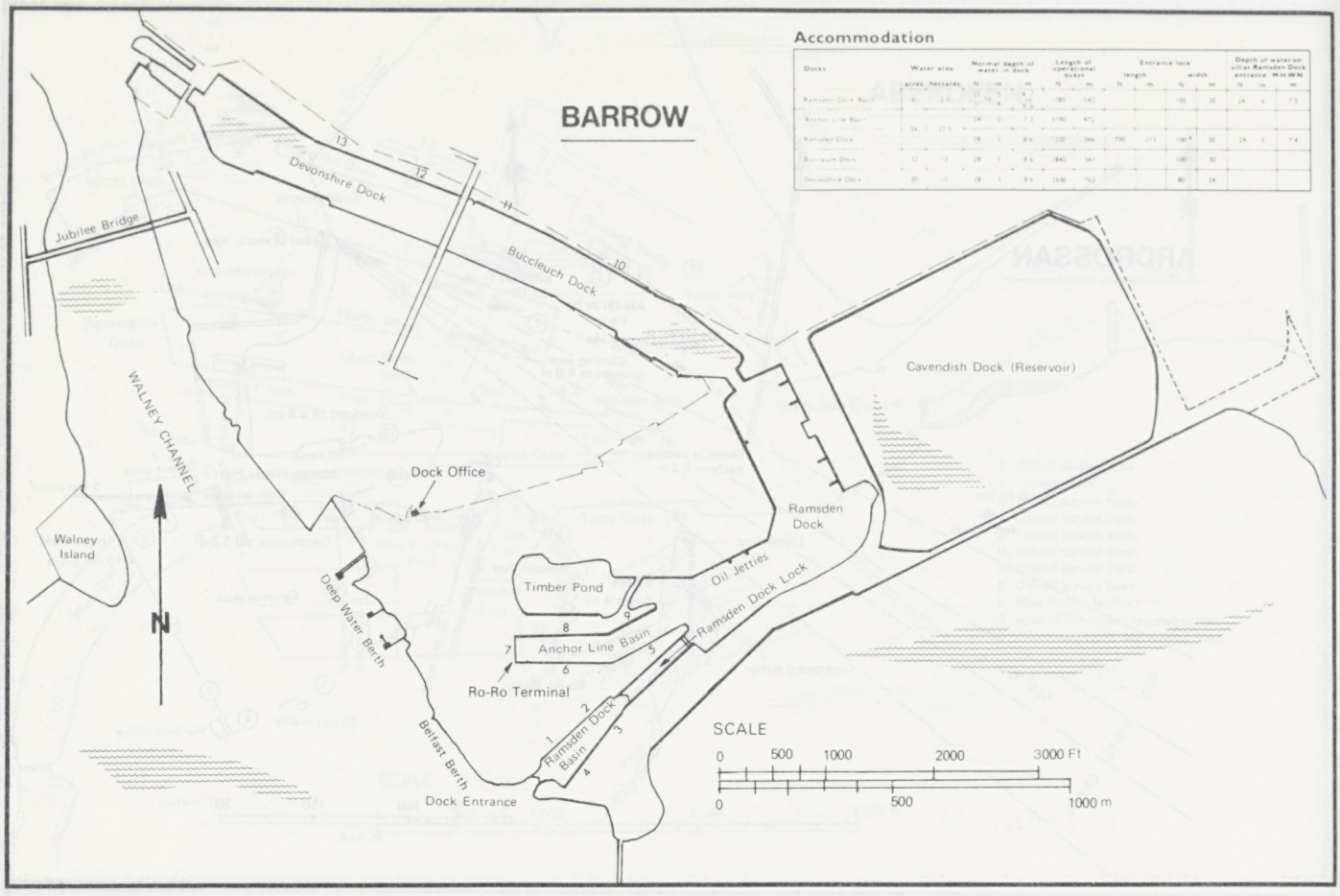

110.00m
57.00m
40.50m
12.50m
– 3.00m
– 2.30m
– 2.00m
Ladder
Filled with concrete
Bollards
Ladder
Cylindrical Rubber Fender
15.00m
10.60m Dia
20.00m
15.00m
12.00m
Possible Location of a 100 Ton crane
15.00m
12.00m
11.00m
Road Axis
ZIRKU ISLAND (3)
PRELIMINARY HARBOUR
N

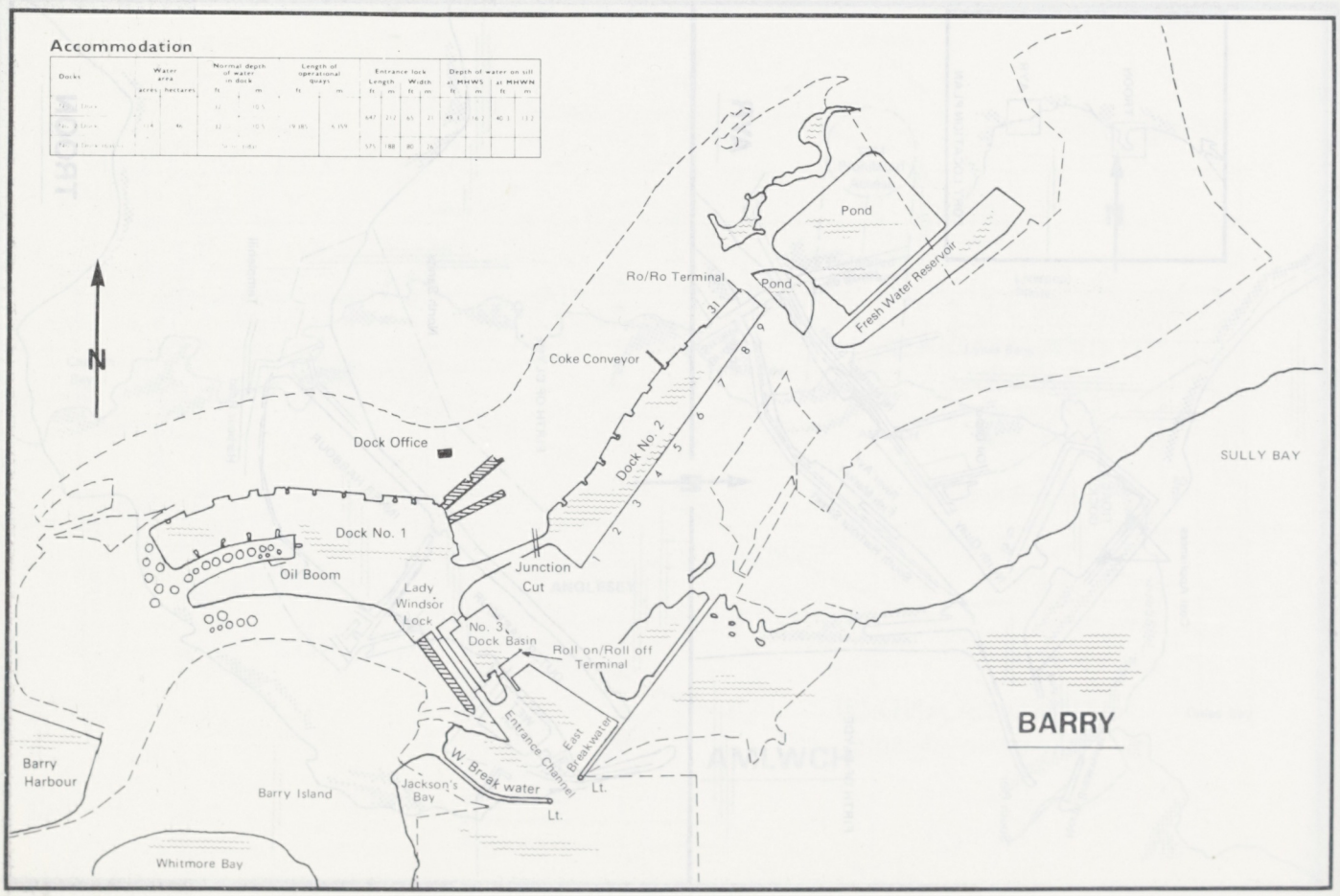

ABERDEEN
Trinity Quay
Regent Quay
Upper Dock
Waterloo Quay
Victoria Dock
Jamieson's Quay
Blaikies Quay
Building Yards
Pocra Jetty
Fish Market
Commercial Quay
Matthews Quay
Palmerston Quay
Pacific Wharf
Atlantic Wharf
Tidal Harbour
Albert Dock
Pontoon Docks
No.4
No.3
No.2
No. 1
Albert Jetty
Albert Quay
Navigation Channel
Point Law
Mearns Quay
Victoria Bridge
River Dee
Ship Building Yard
River Dee Dock
Torry Quay
Maitland Quay
L.W.O.S.T.
N
SCALE
0
500
1,000
2,000
3,000 ft.
1. Oilfield service base.
2. Graving dock.
3. Oilfield service base.
4. Oilfield service base.
5. Oilfield service base.
6. Oilfield service base.
7. Oilfield service base.
8. Oilfield service base.
9. New Ro/Ro facility
10. Area of fishmarket reconstruction
11. Container Depot/Marshalling Yard.

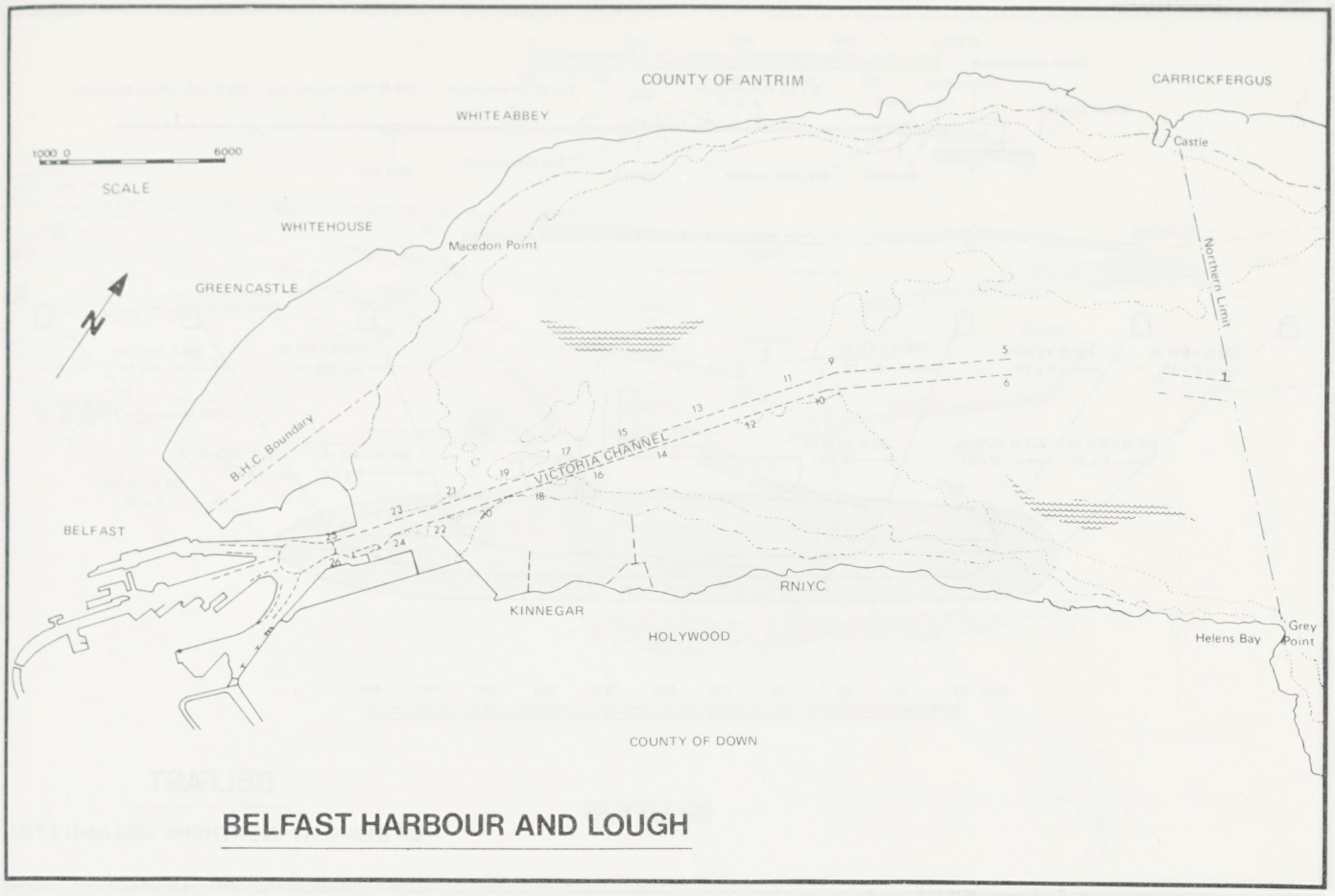

SBM
Prohibited Access
Prohibited Anchorage
Liverpool Pilots
Lynes Bank
Camlyn Bay
Bull Bay
AMLWCH
ANGLESEY
Dulas Bay
N
AMLWCH


ARDROSSAN
N
Breakwater
Lead in sector light
AH (3) Fl. R. 1½ s
AH (2) Fl.R 1½ s
AH (1) Fl. R. 1½ s
Canting area dredged to 4.6 m
Depth in approach to harbour 5.2 m
Fl. (2) R. 10s
West Crinan
Dredged to 8.3 m.
12
Tanker berth
Lamp
11
Montgomerie Pier
Transit shed
5 ton crane
Bulk oil berth
1A
1
2
10 ton crane
10 ton crane
Tide board
Depth over sill 5.2 m.
14
10
Winton pier station
Lighthouse
Winton Pier
Swept depth 4 m.
16
7
6
Eglinton dock
Ro/Ro ramp
5 ton crane
8
2A
Coastguard station
Ro-Ro Ramp
5
3
32 ton crane
4
Harbour office
RED
WHITE
GREEN
055° True
0 50 100 150 200 metres
SCALE

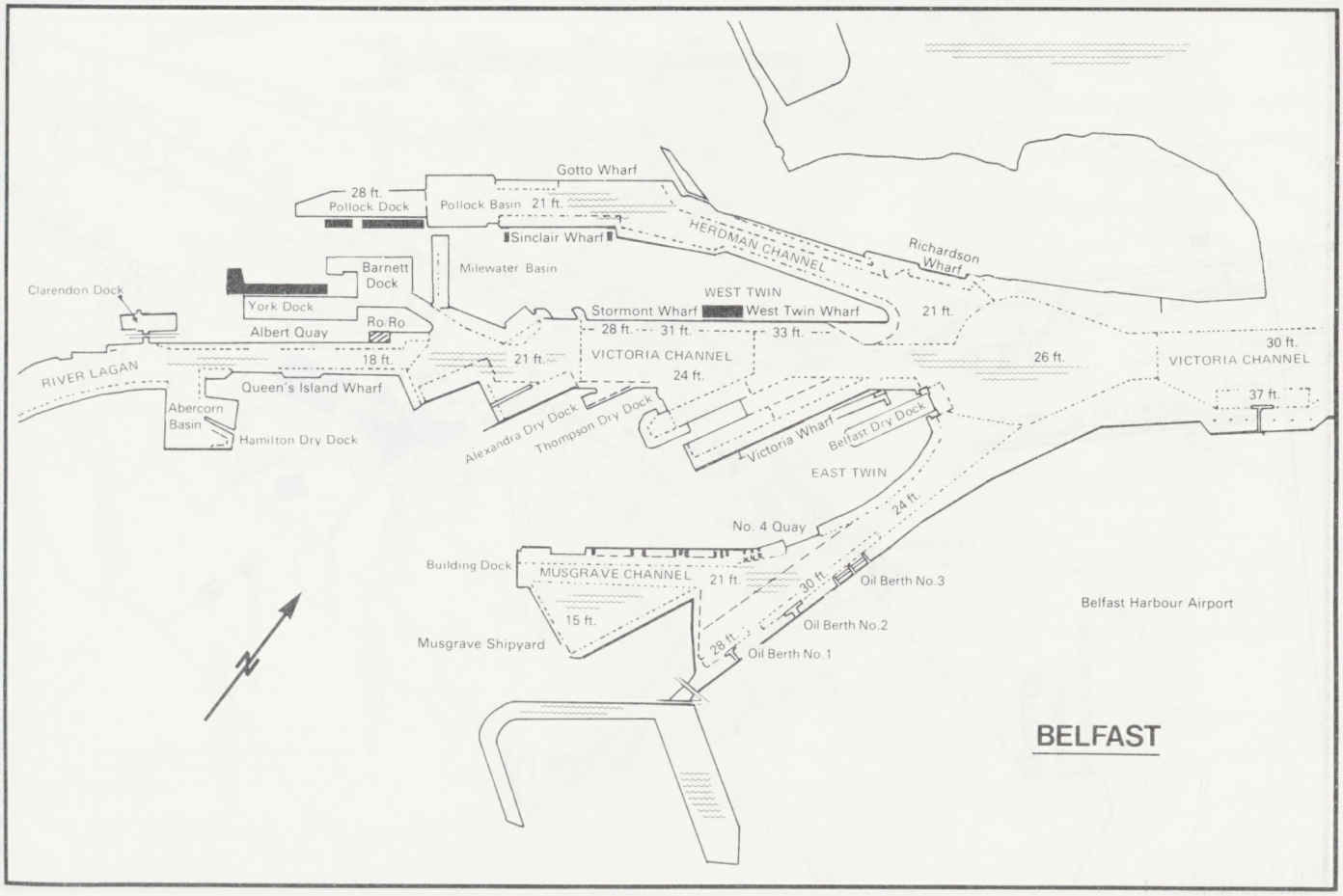

PORT LOCATION PLAN
TROON
AYR
AYR
Main Street
New Bridge Street
N. Harbour Street
Oil Depot
River Ayr
Fish Market
South Harbour Street
TIDAL DOCK
North Quay
Coal Appliances
North Pier
North Breakwater
South Pier
FIRTH OF CLYDE
N
FIRTH OF CLYDE
North Sands
Templehill
Harbour Road
INNER HARBOUR
OUTER HARBOUR
WET DOCK
TROON


BARROW
Accommodation
Devonshire Dock
Buccleuch Dock
Jubilee Bridge
WALNEY CHANNEL
Walney Island
Dock Office
Deep Water Berth
Belfast Berth
Timber Pond
Anchor Line Basin
Ro-Ro Terminal
Ramsden Dock Basin
Dock Entrance
Oil Jetties
Ramsden Dock Lock
Ramsden Dock
Cavendish Dock (Reservoir)
N
SCALE
0 500 1000 2000 3000 Ft
0 500 1000 m

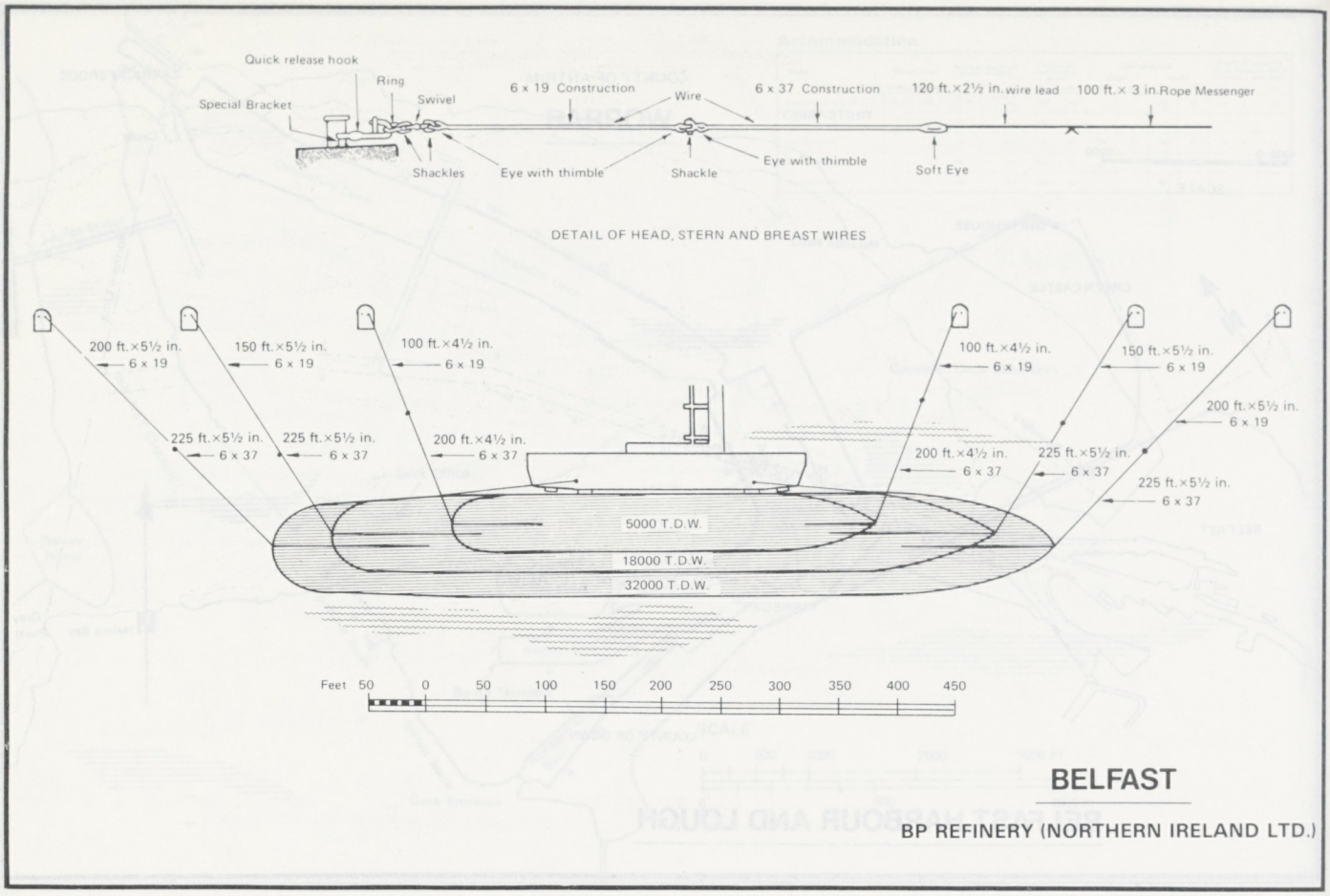

Accommodation
Pond
Ro/Ro Terminal
Pond
Fresh Water Reservoir
Coke Conveyor
Dock No. 2
Dock Office
Dock No. 1
Oil Boom
Junction Cut
Lady Windsor Lock
No. 3 Dock Basin
Roll on/Roll off Terminal
Entrance Channel
East Breakwater
W. Breakwater
Lt.
Jackson's Bay
Barry Harbour
Barry Island
Whitmore Bay
SULLY BAY
BARRY
N



BELFAST HARBOUR AND LOUGH

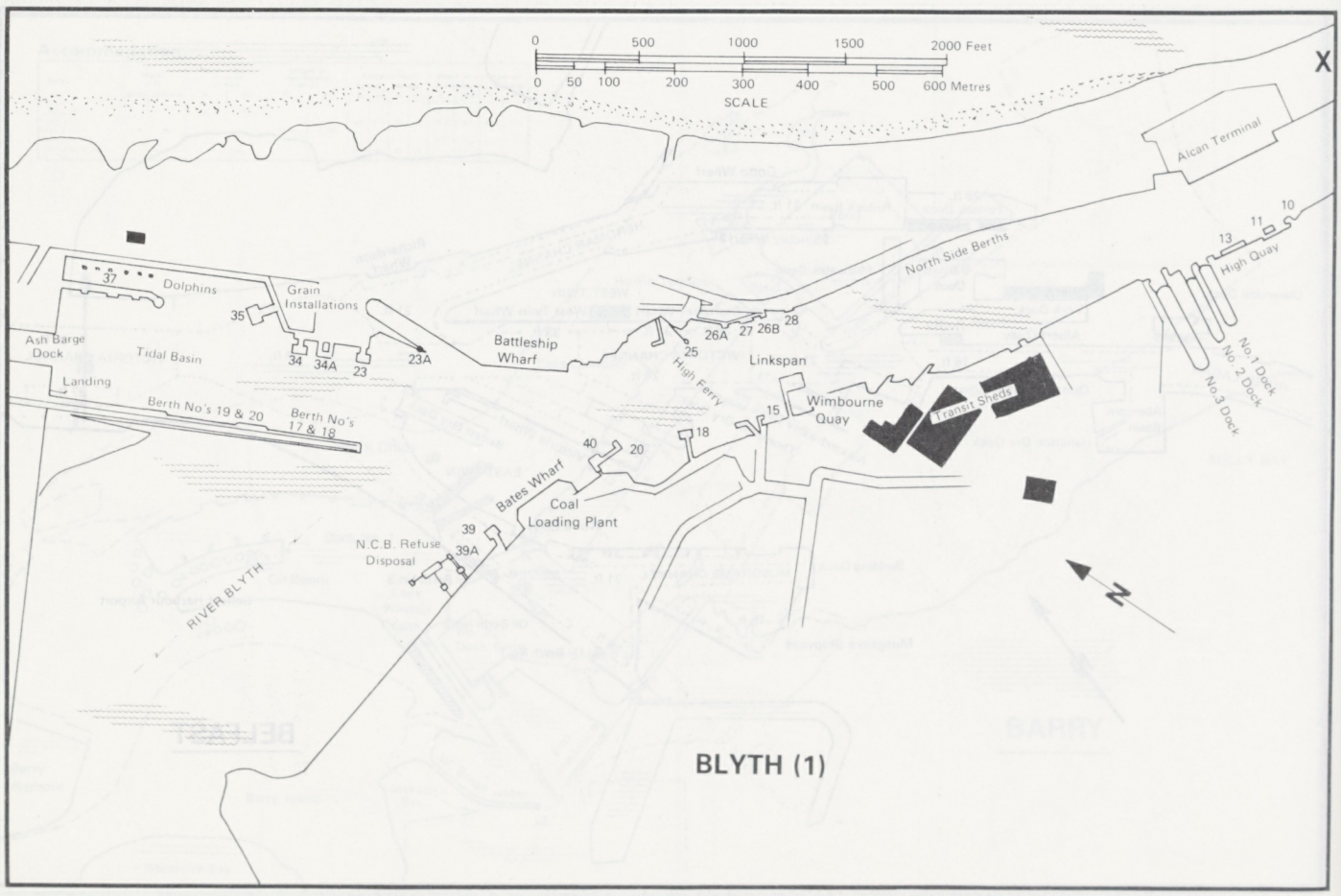


BELFAST

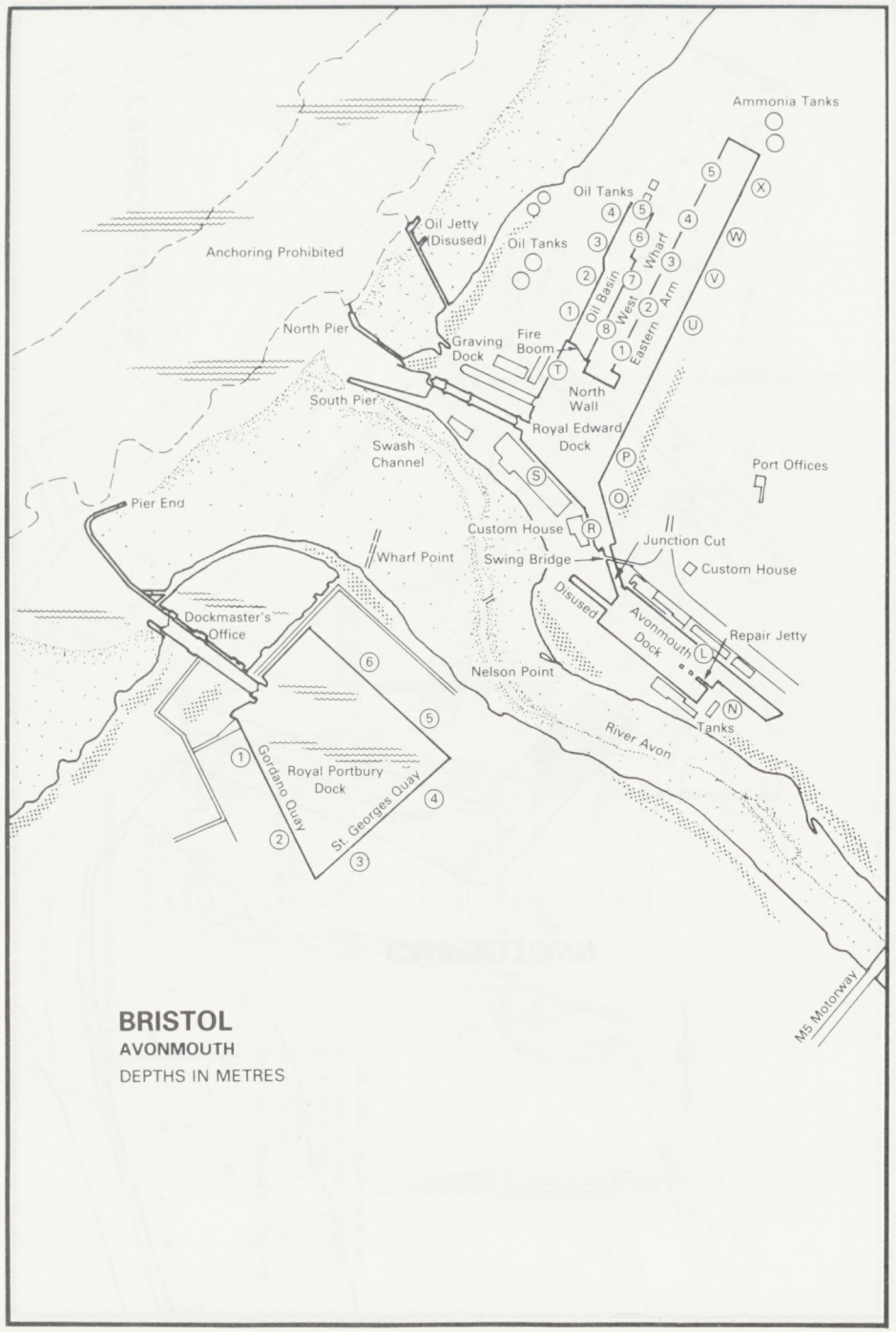


BELFAST

BP REFINERY (NORTHERN IRELAND LTD.)



BLYTH (1)



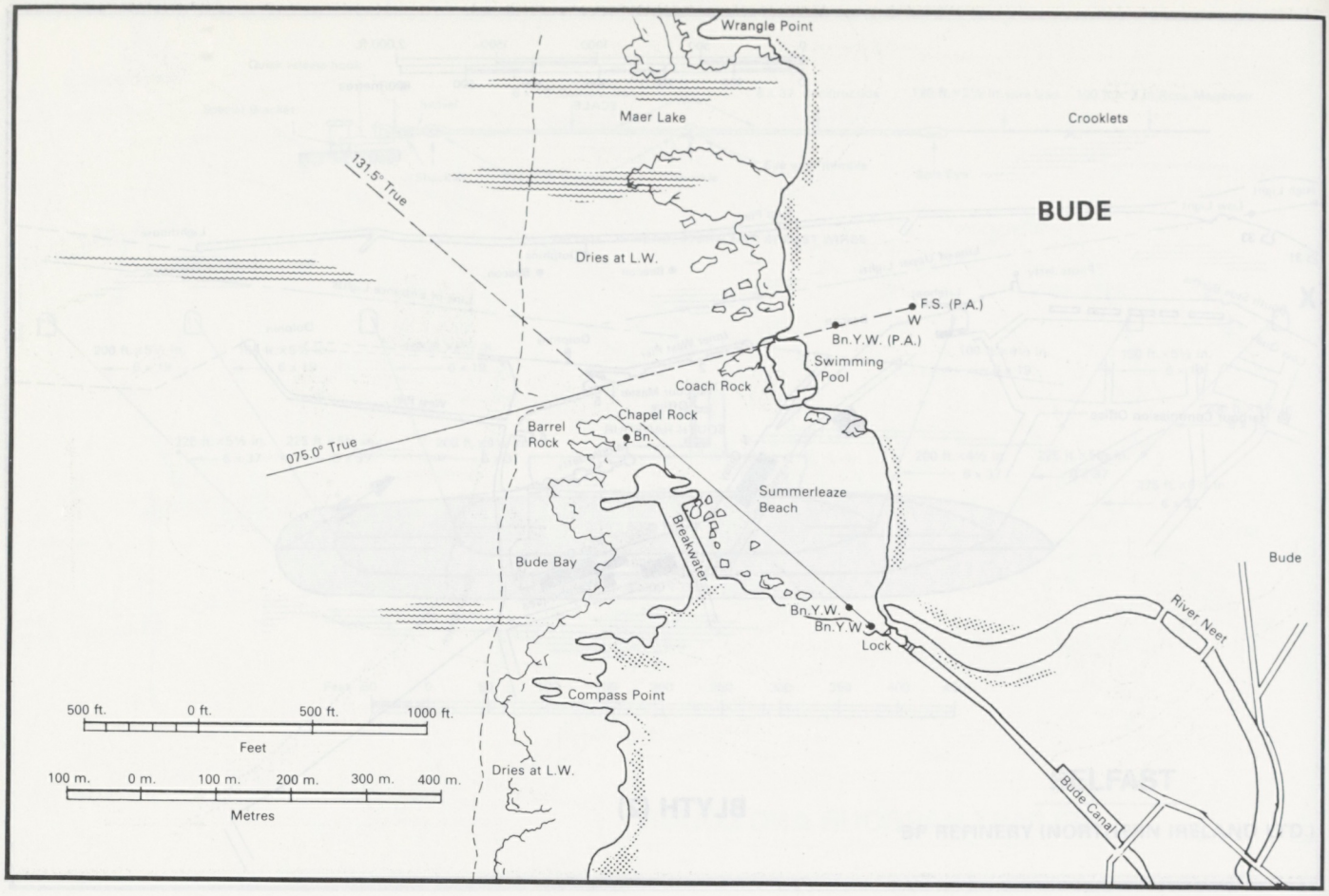
BRISTOL

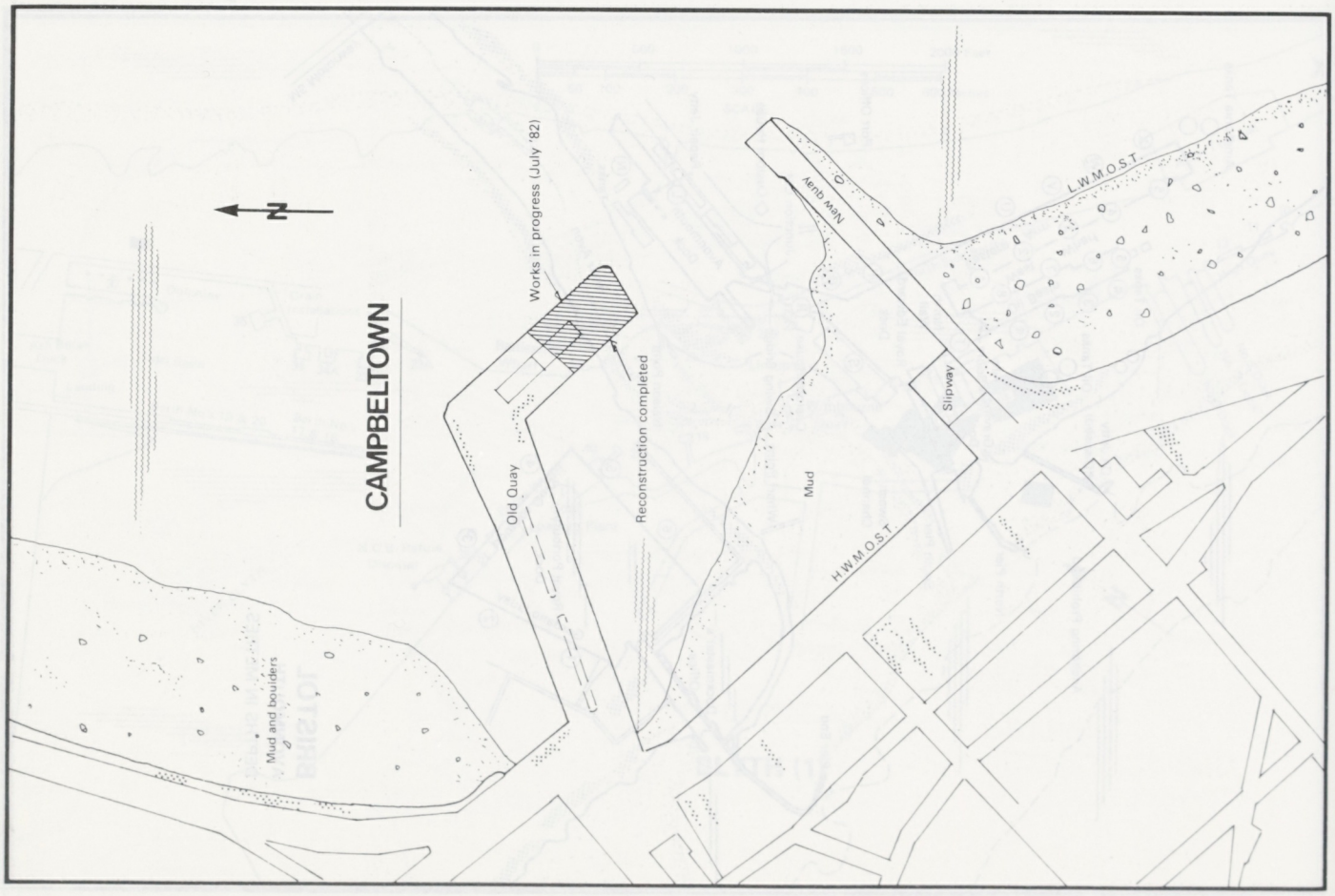
AVONMOUTH

DEPTHS IN METRES

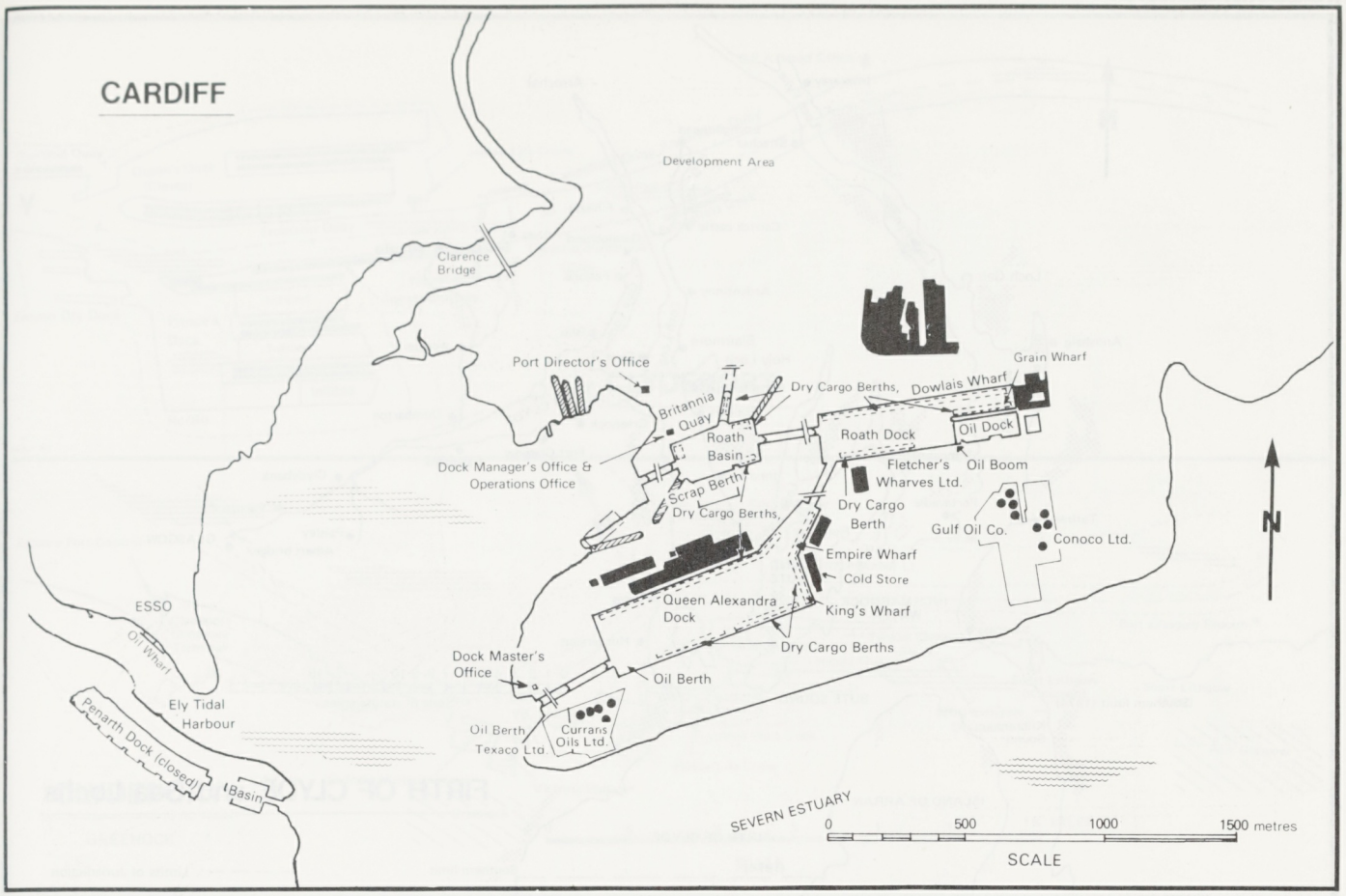
BLYTH (2)

UNITED KINGDOM

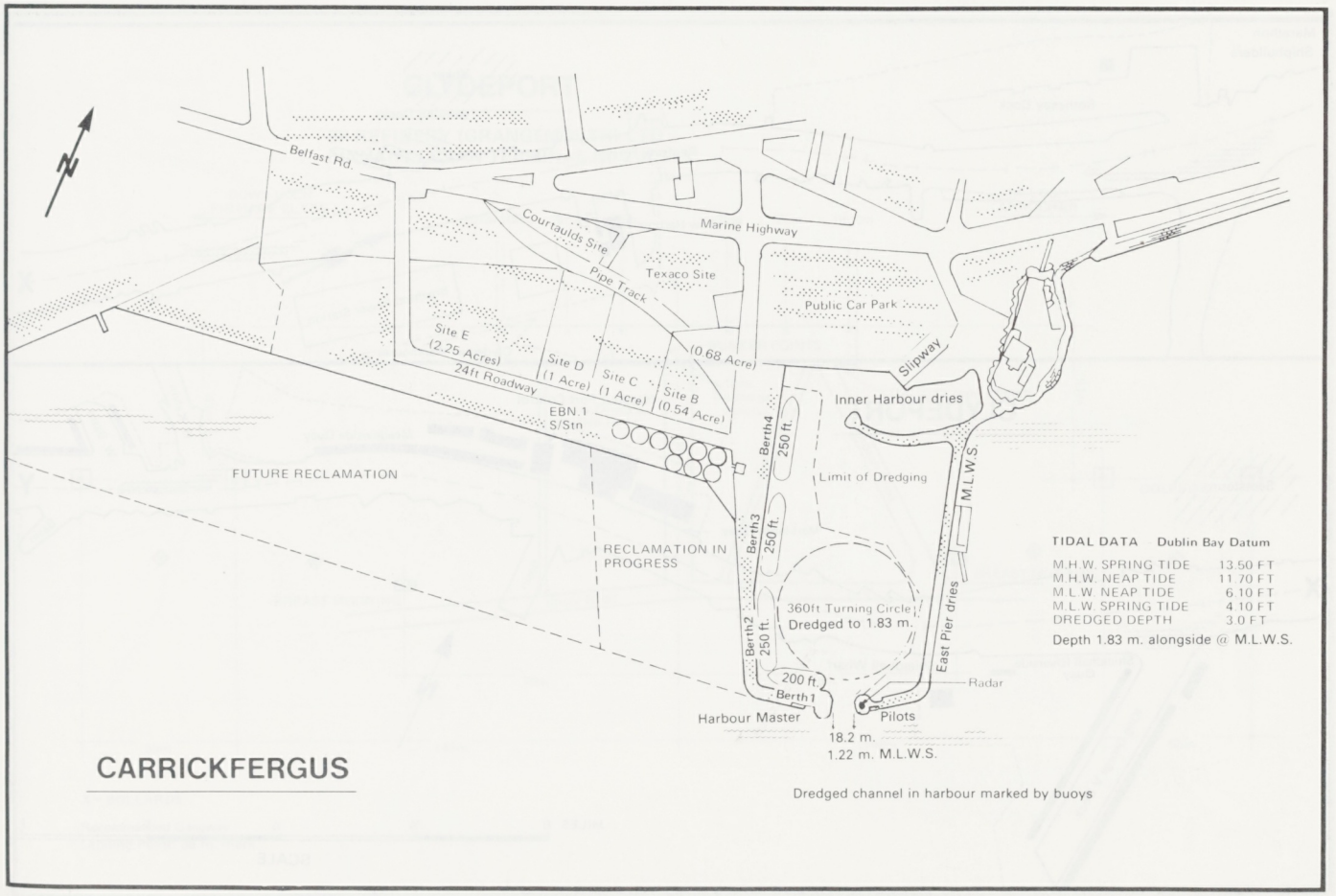

Wrangle Point
Maer Lake
Crooklets
BUDE
131.5° True
Dries at L.W.
F.S. (P.A.)
W
Bn.Y.W. (P.A.)
Swimming Pool
Coach Rock
Chapel Rock
Barrel Rock
Bn.
075.0° True
Summerleaze Beach
Breakwater
Bude Bay
Bude
Bn.Y.W.
Bn.Y.W
Lock
River Neet
Compass Point
500 ft. 0 ft. 500 ft. 1000 ft.
Feet
100 m. 0 m. 100 m. 200 m. 300 m. 400 m.
Metres
Dries at L.W.
Bude Canal

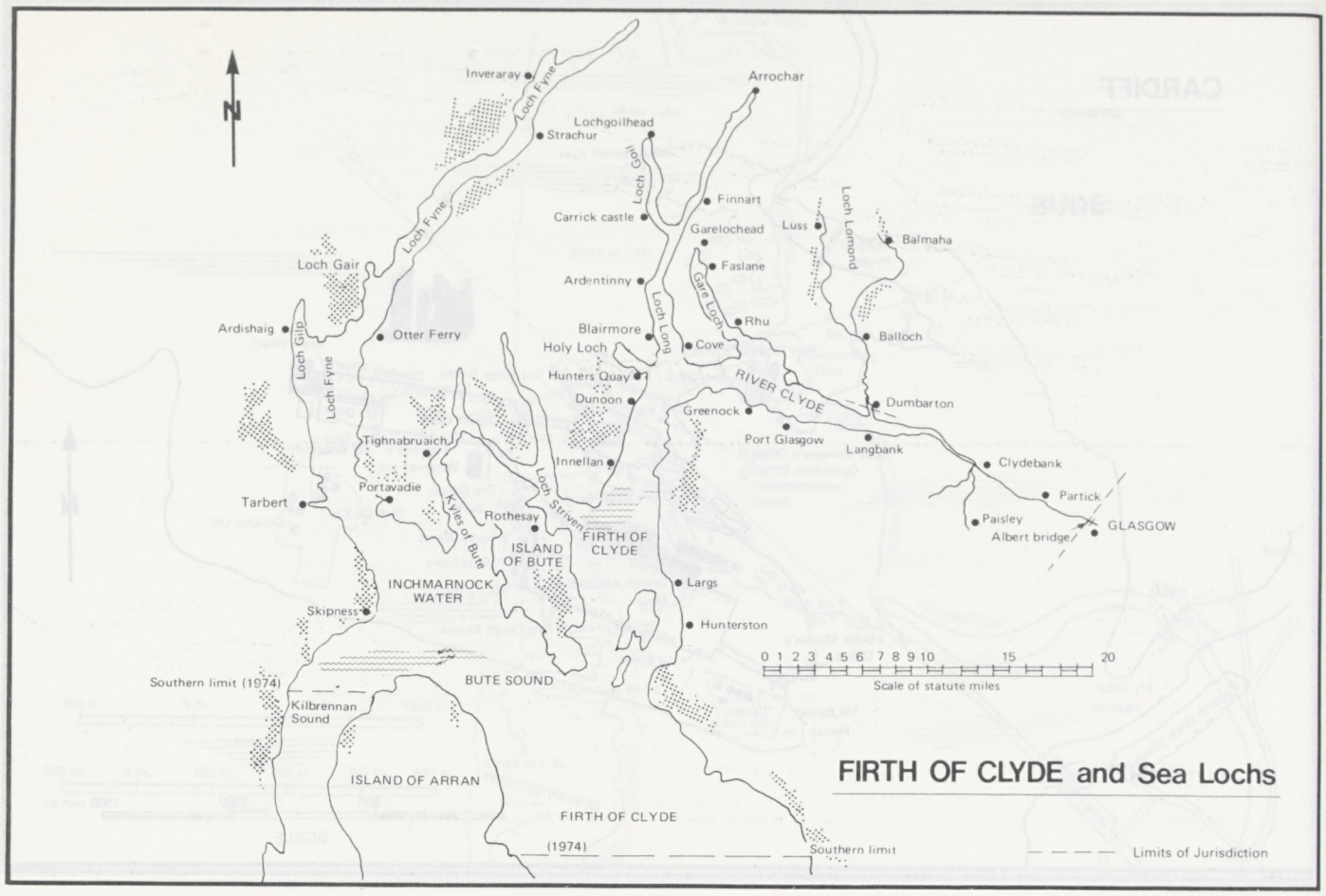

N
CAMPBELTOWN
Works in progress (July '82)
Reconstruction completed
Old Quay
Mud and boulders
Mud
Slipway
L.W.M.O.S.T.
H.W.M.O.S.T.

CARDIFF

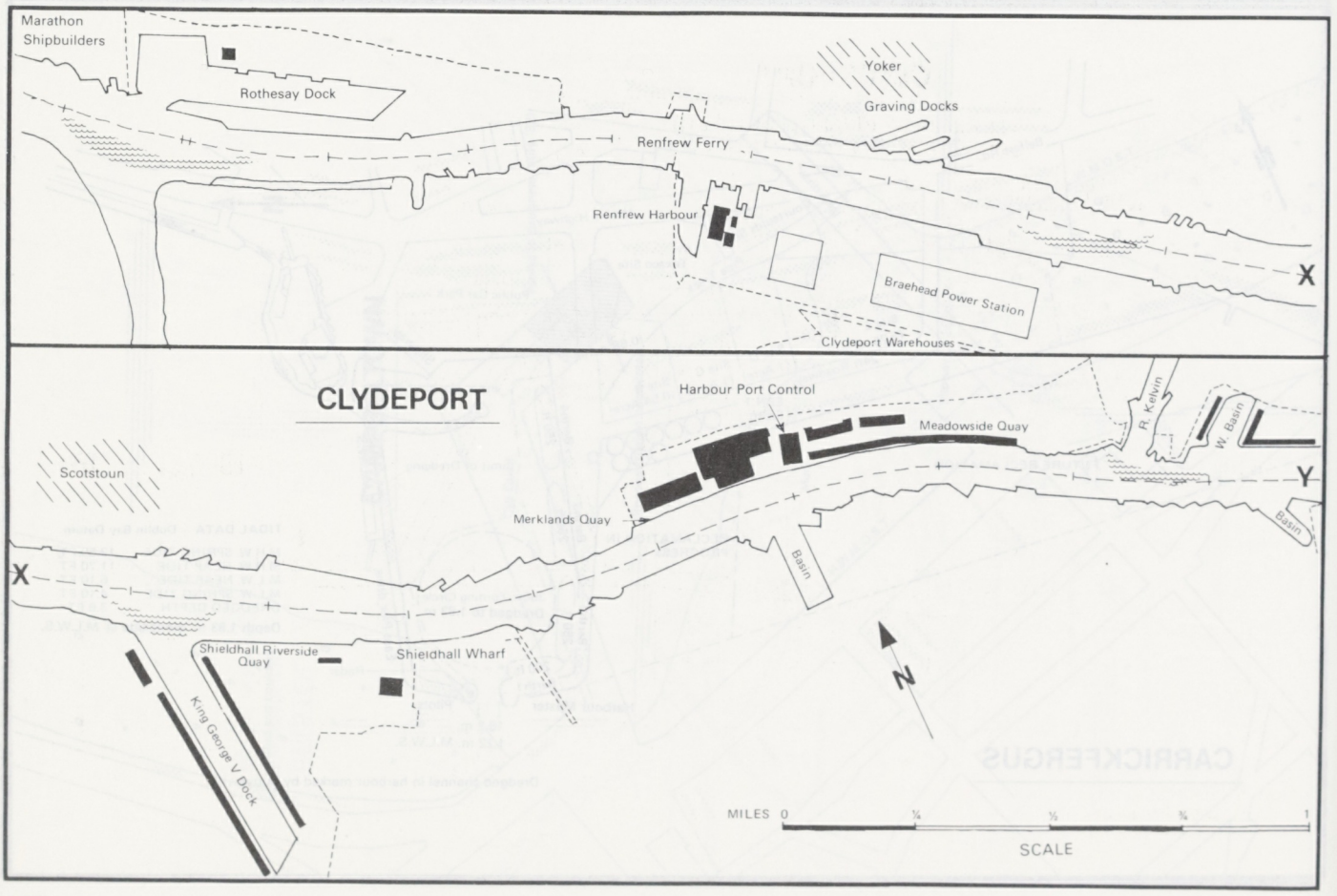


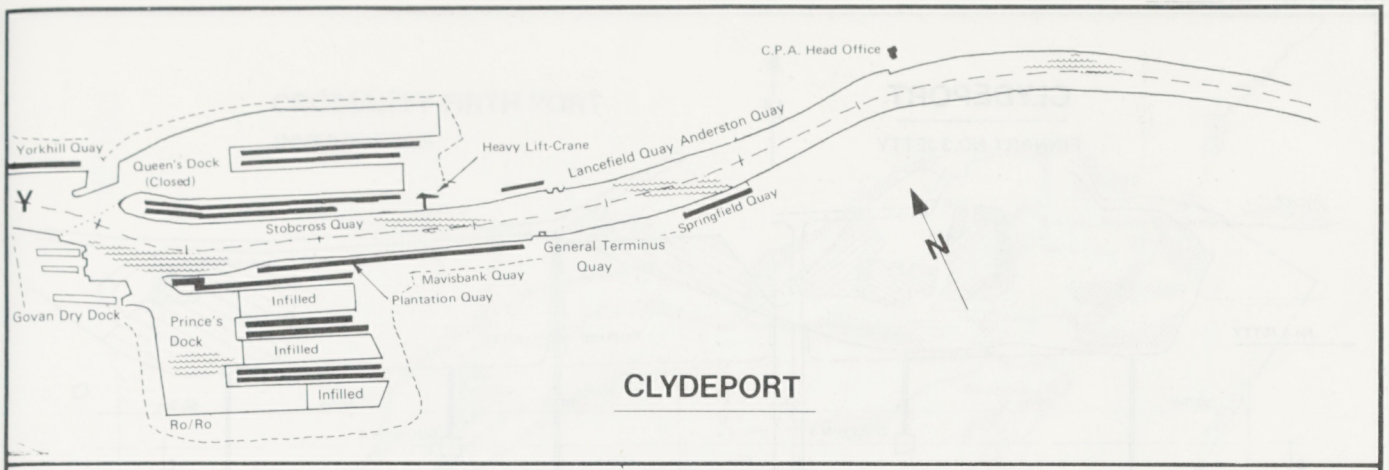
CARRICKFERGUS

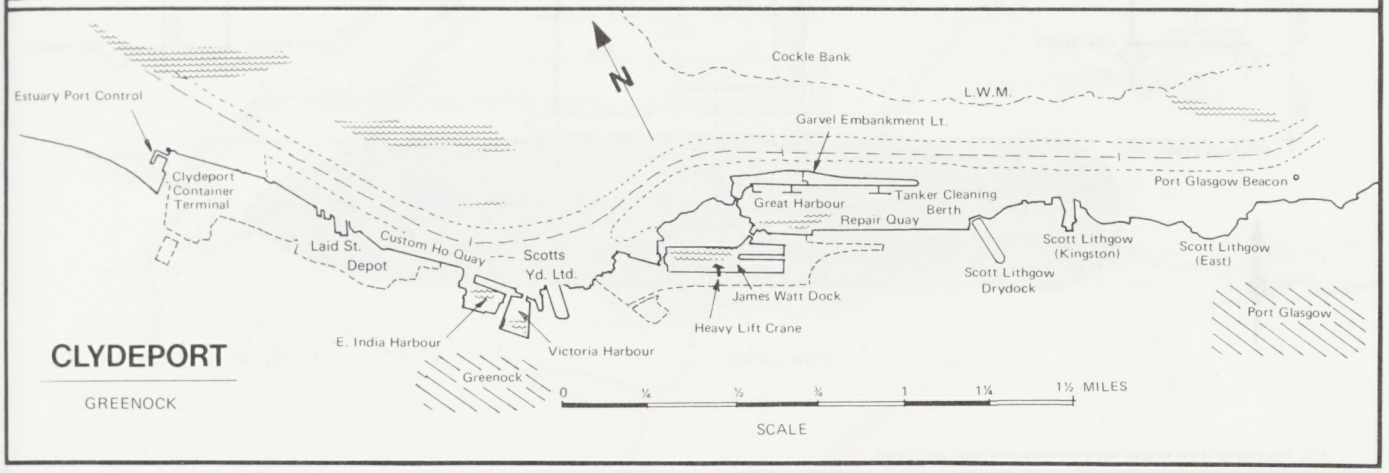




FIRTH OF CLYDE and Sea Lochs

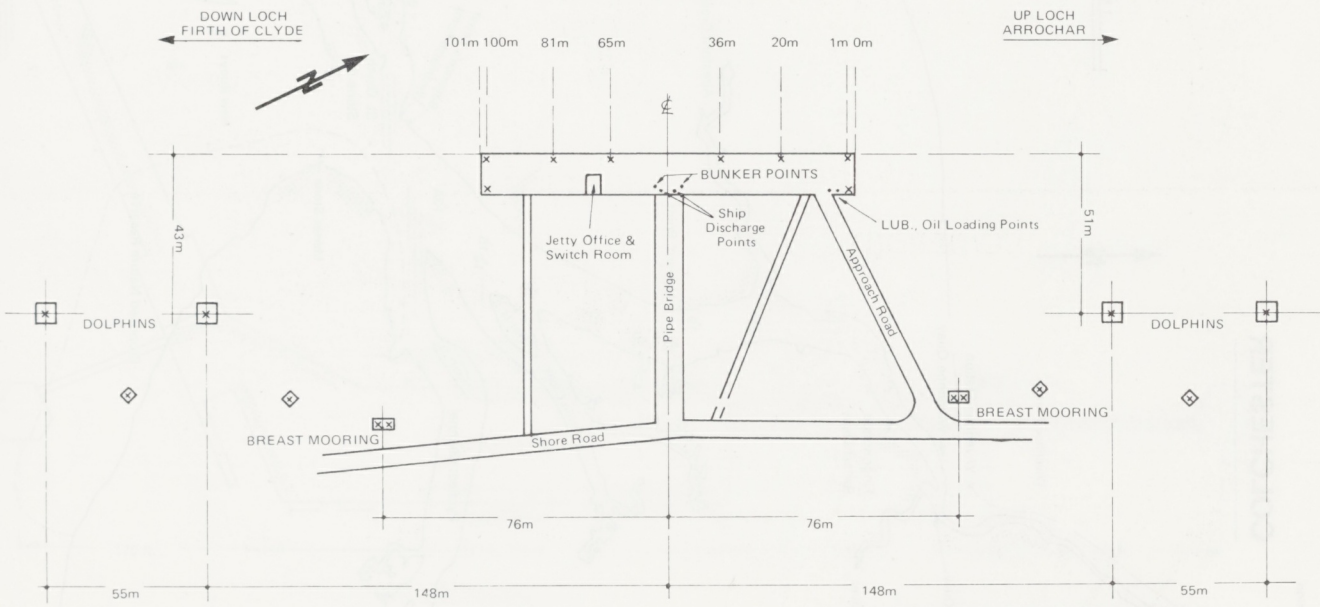






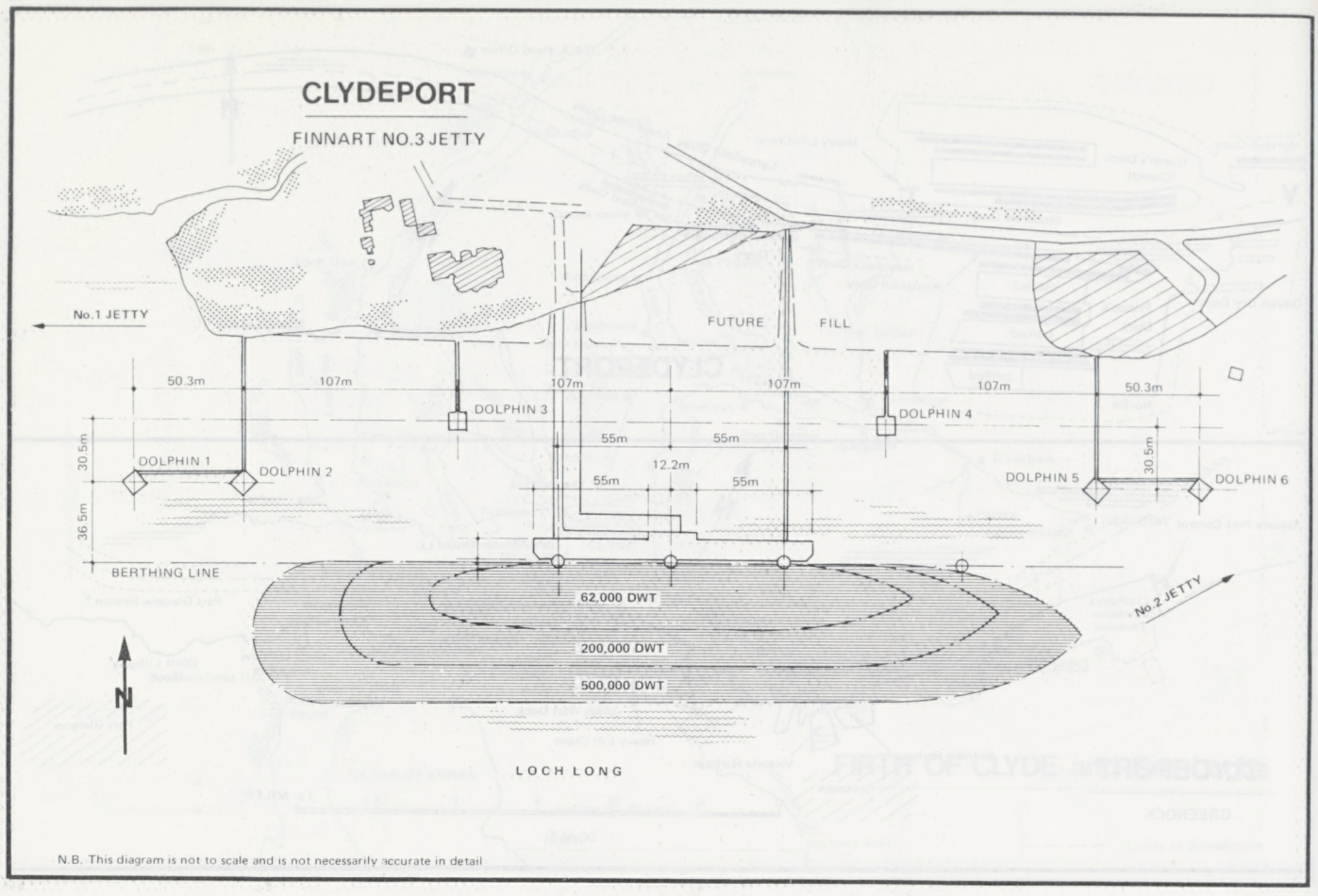
CLYDEPORT

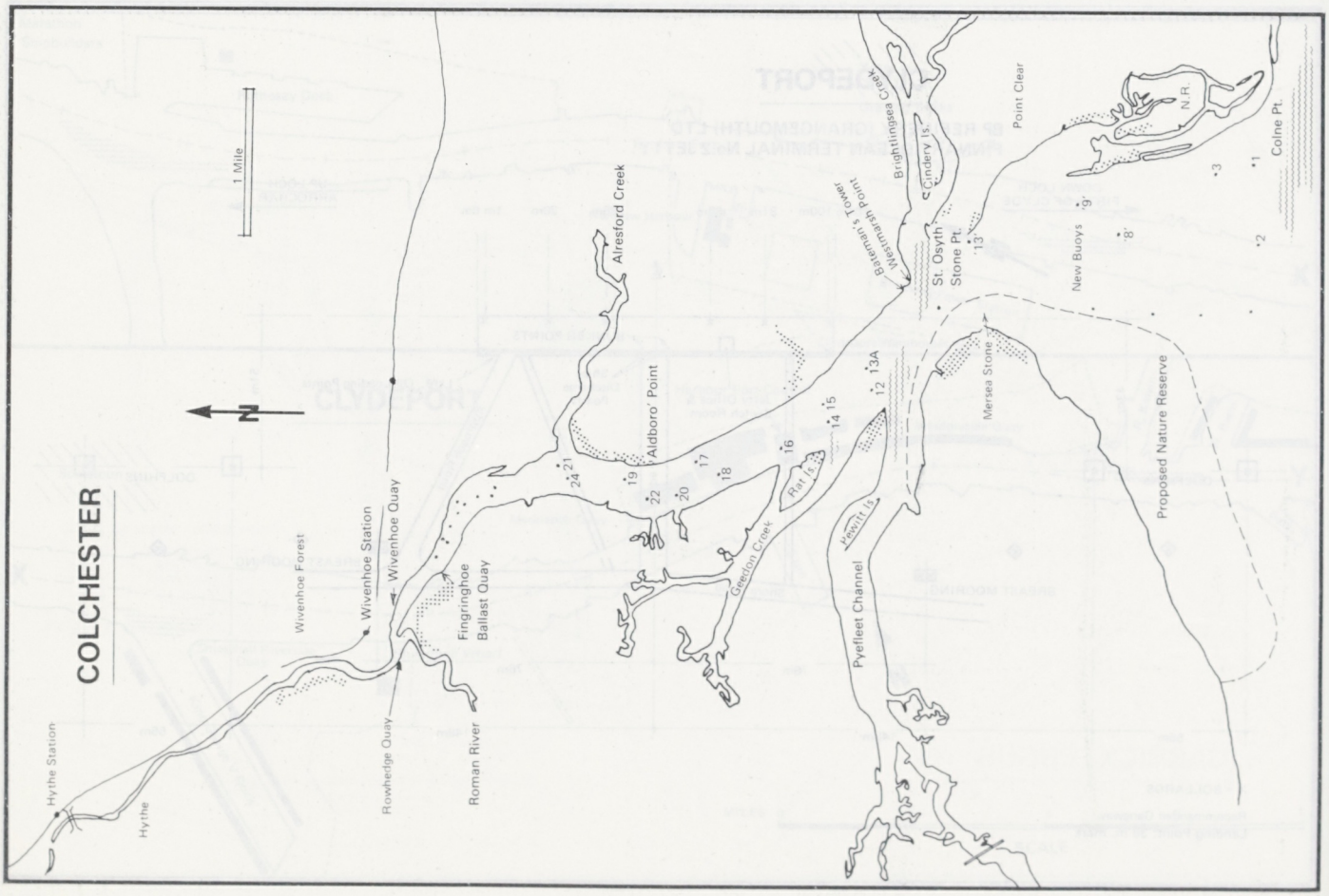
BP REFINERY (GRANGEMOUTH) LTD
FINNART OCEAN TERMINAL No.2 JETTY

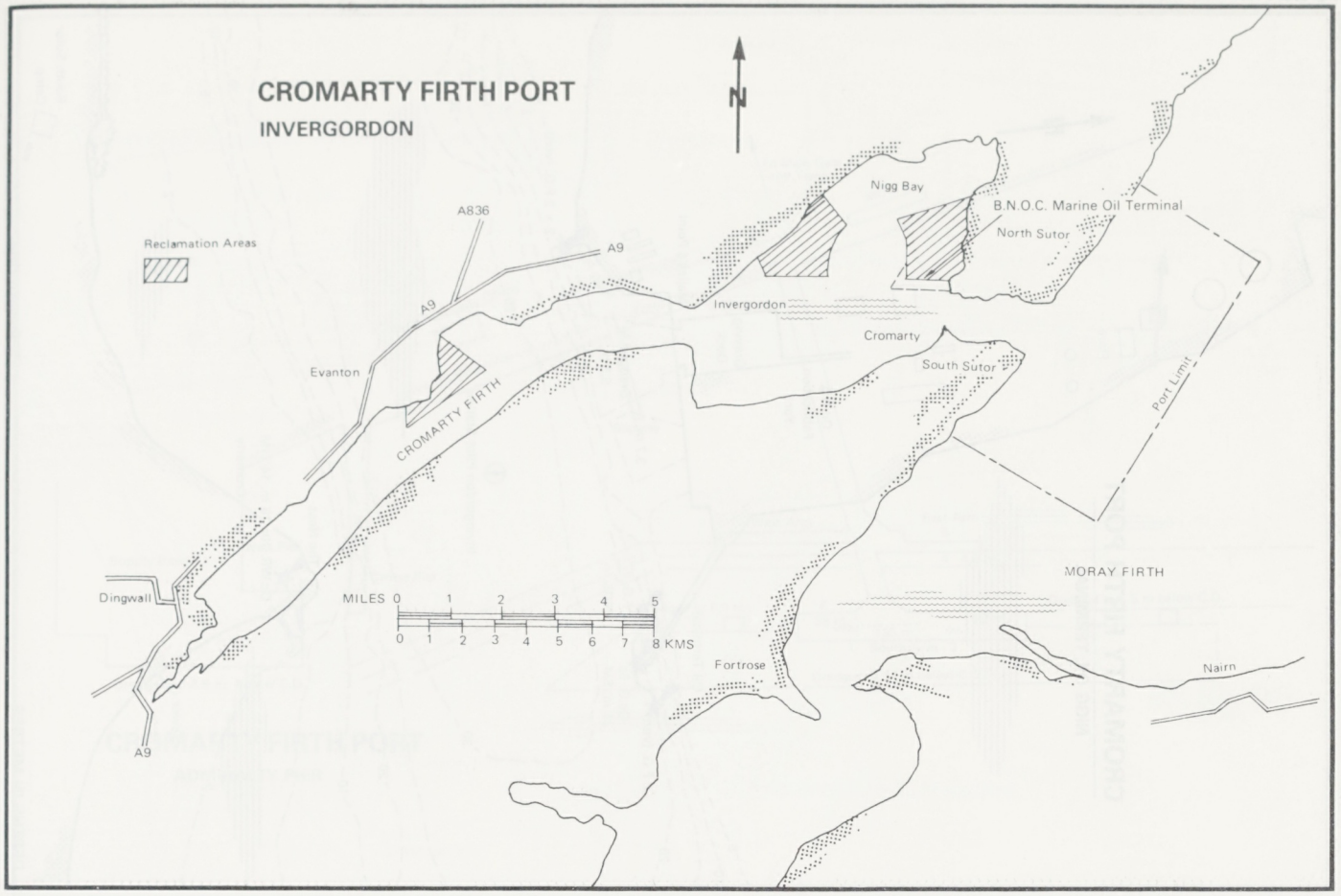


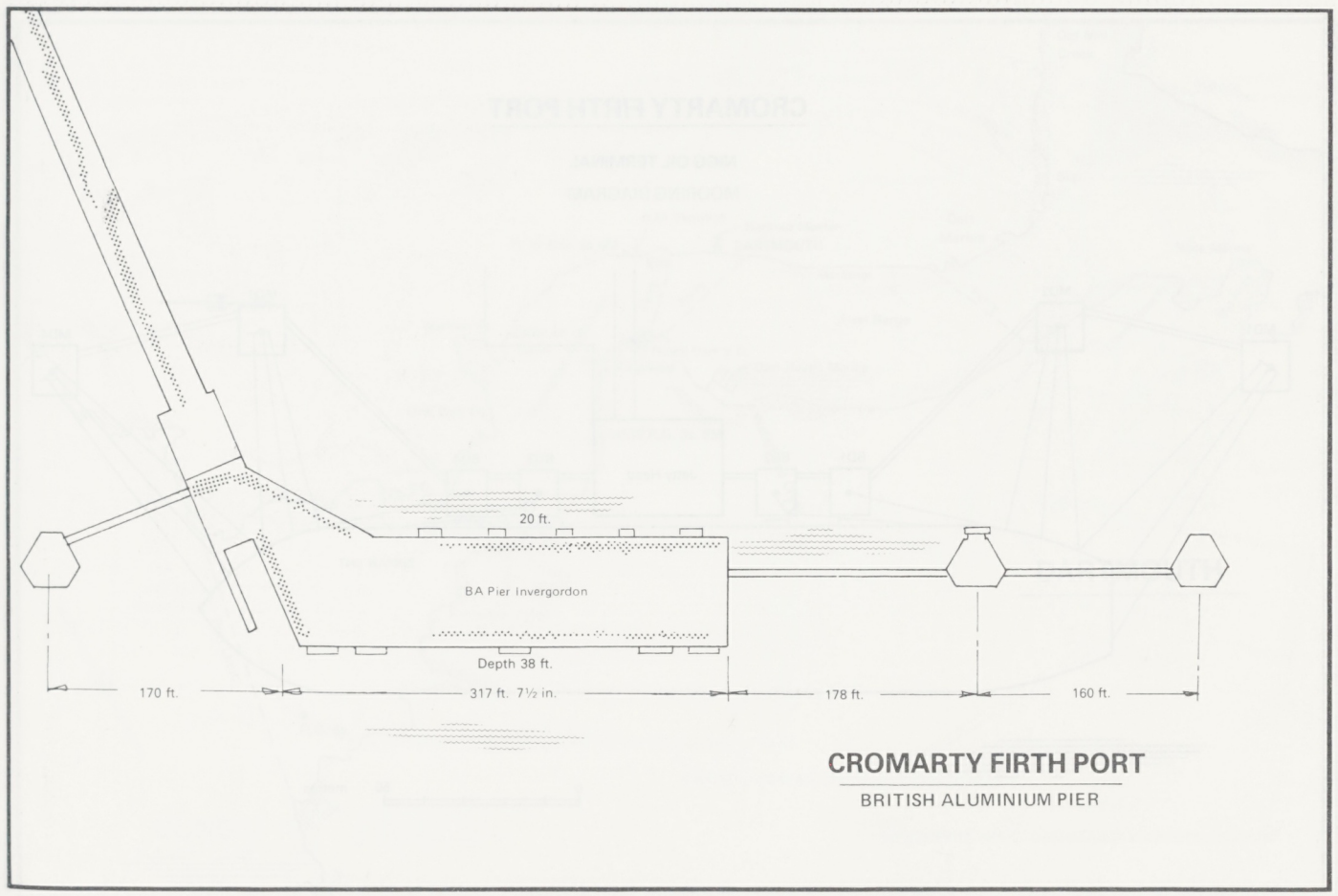
X = BOLLARDS

Recommended Gangway
Landing Point: 38 m. mark


CLYDEPORT
FINNART NO.3 JETTY
No.1 JETTY
FUTURE
FILL
50.3m
107m
107m
107m
107m
50.3m
DOLPHIN 3
DOLPHIN 4
55m
55m
30.5m
DOLPHIN 1
DOLPHIN 2
12.2m
55m
55m
DOLPHIN 5
30.5m
DOLPHIN 6
36.5m
BERTHING LINE
62,000 DWT
No.2 JETTY
200,000 DWT
500,000 DWT
N
LOCH LONG
N.B. This diagram is not to scale and is not necessarily accurate in detail

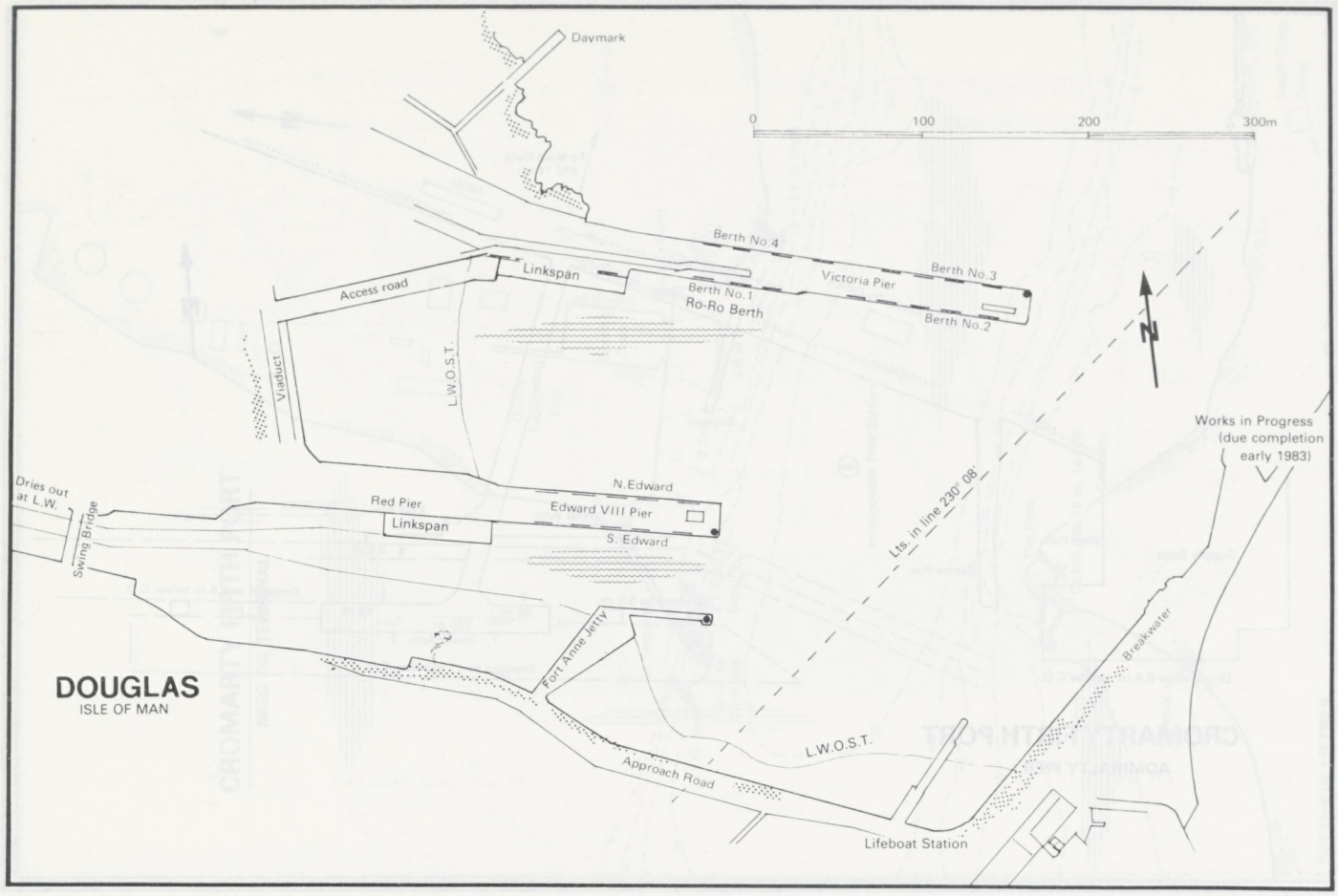

1 Mile
N
COLCHESTER
Wivenhoe Forest
Wivenhoe Station
Wivenhoe Quay
Fingringhoe Ballast Quay
Rowhedge Quay
Roman River
Hythe Station
Hythe
Alresford Creek
'Aldboro' Point
Pier
Geedon Creek
Pyefleet Channel
Haven
Proposed Nature Reserve
Mersea Stone
Bateman's Tower
Brightlingsea Creek
Cinder
St. Osyth Stone Pt.
Point Clear
N.R.
New Buoys
Colne Pt.

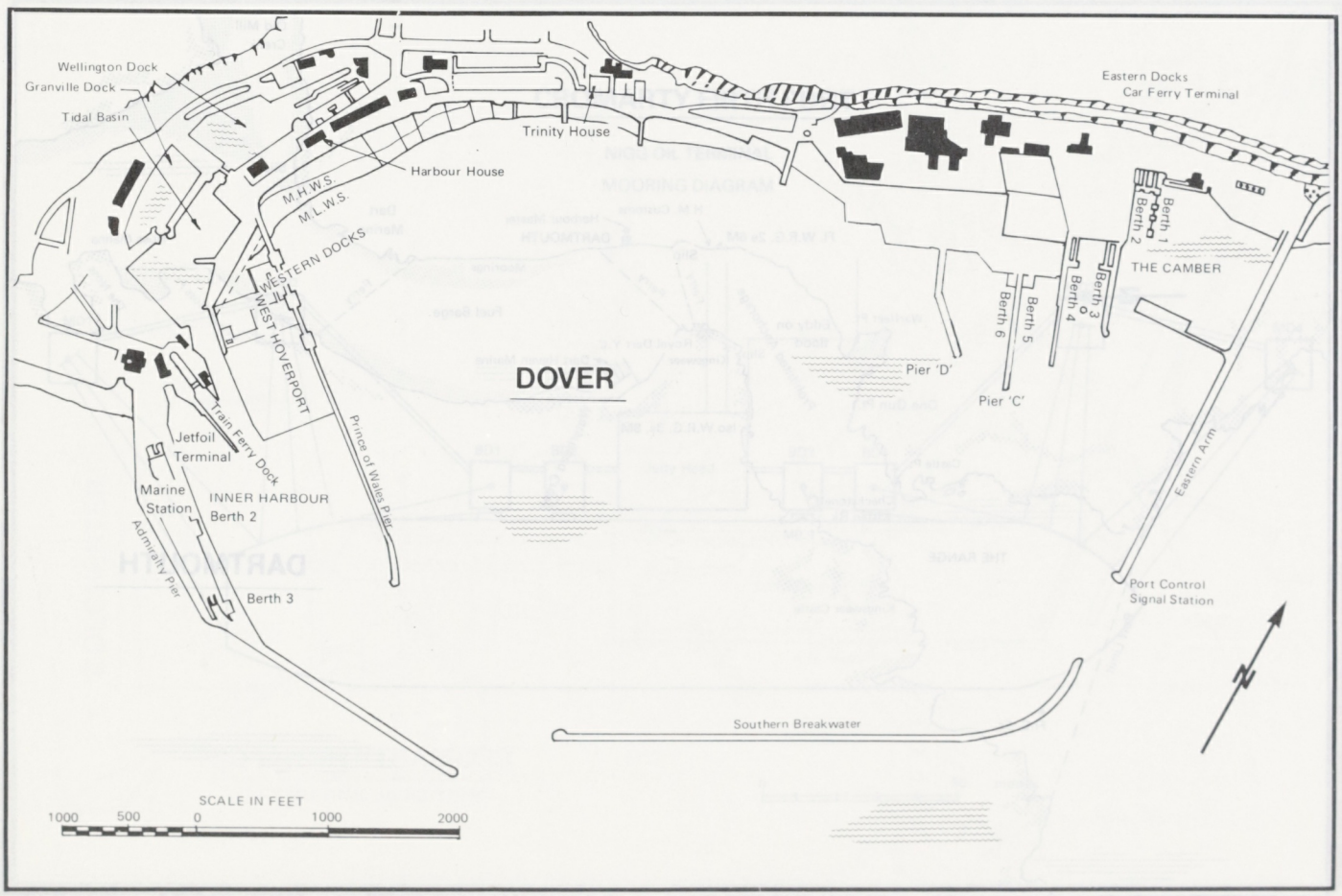


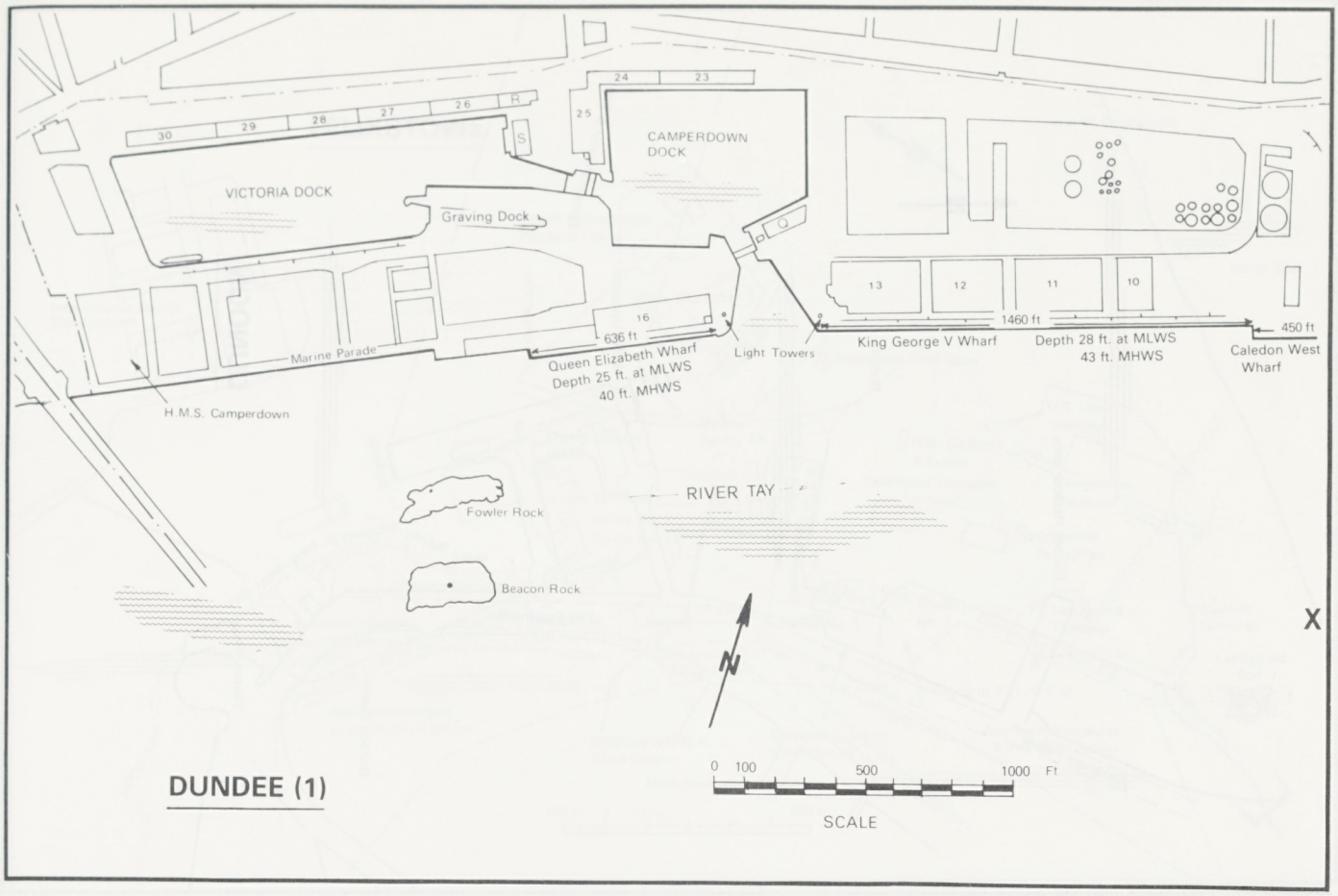


CROMARTY FIRTH PORT

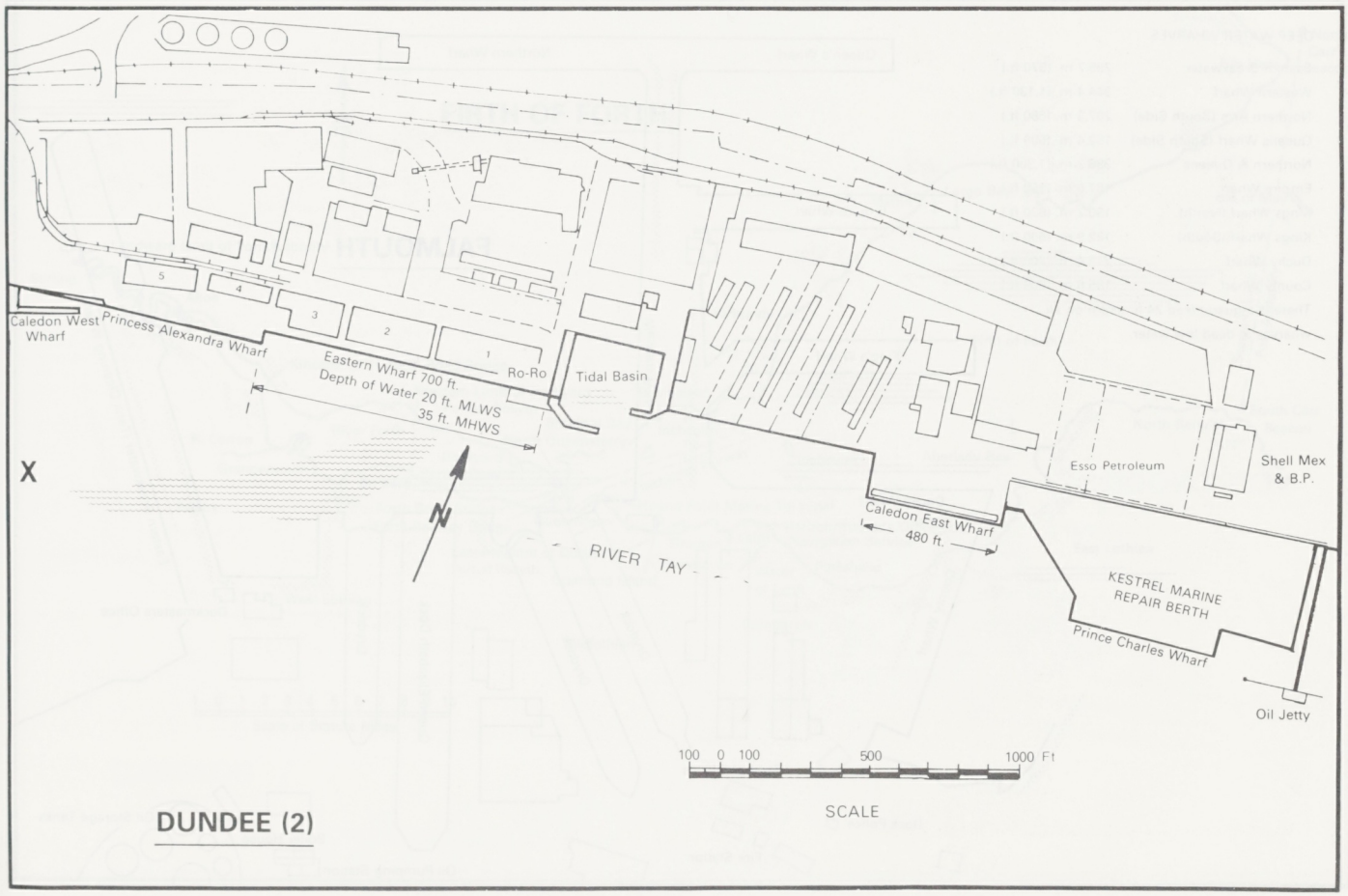
BRITISH ALUMINIUM PIER


Davmark
0
100
200
300m
Berth No.4
Victoria Pier
Berth No.3
Access road
Linkspan
Berth No.1
Ro-Ro Berth
Berth No.2
Viaduct
L.W.O.S.T.
N
Works in Progress
(due completion
early 1983)
Dries out
at L.W.
Swing Bridge
N.Edward
Red Pier
Edward VIII Pier
Linkspan
S. Edward
Lts. in line 230° 08'
Fort Anne Jetty
Breakwater
DOUGLAS
ISLE OF MAN
L.W.O.S.T.
Approach Road
Lifeboat Station

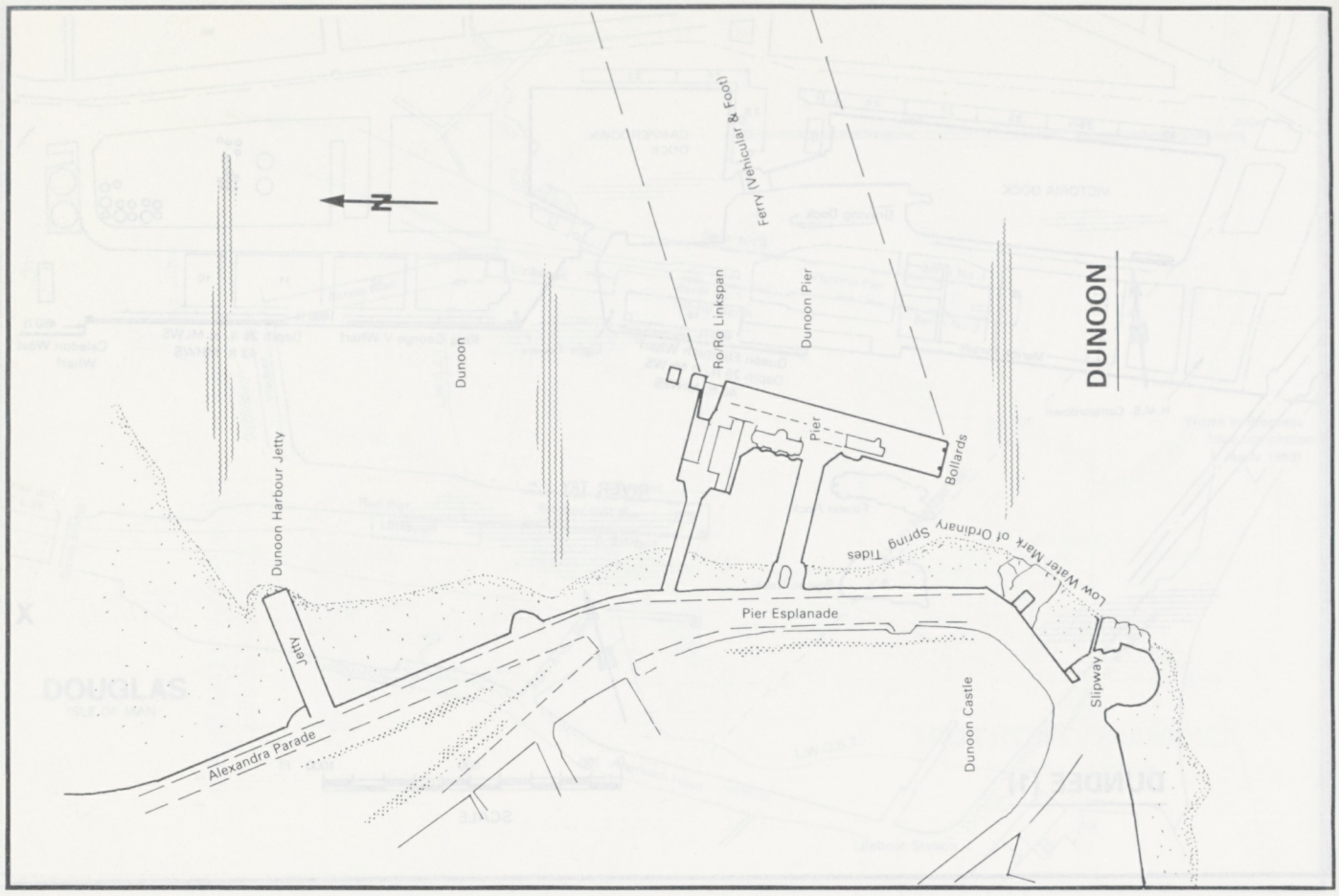

Wellington Dock
Granville Dock
Tidal Basin
Trinity House
Harbour House
M.H.W.S.
M.L.W.S.
WESTERN DOCKS
WEST HOVERPORT
Eastern Docks
Car Ferry Terminal
Berth 1
Berth 2
THE CAMBER
Berth 3
Berth 4
Berth 5
Berth 6
Pier 'D'
Pier 'C'
DOVER
Train Ferry Dock
Jetfoil
Terminal
Marine
Station
INNER HARBOUR
Berth 2
Berth 3
Admiralty Pier
Prince of Wales Pier
Eastern Arm
Port Control
Signal Station
Southern Breakwater
N
SCALE IN FEET
1000
500
0
1000
2000



DUNDEE (1)



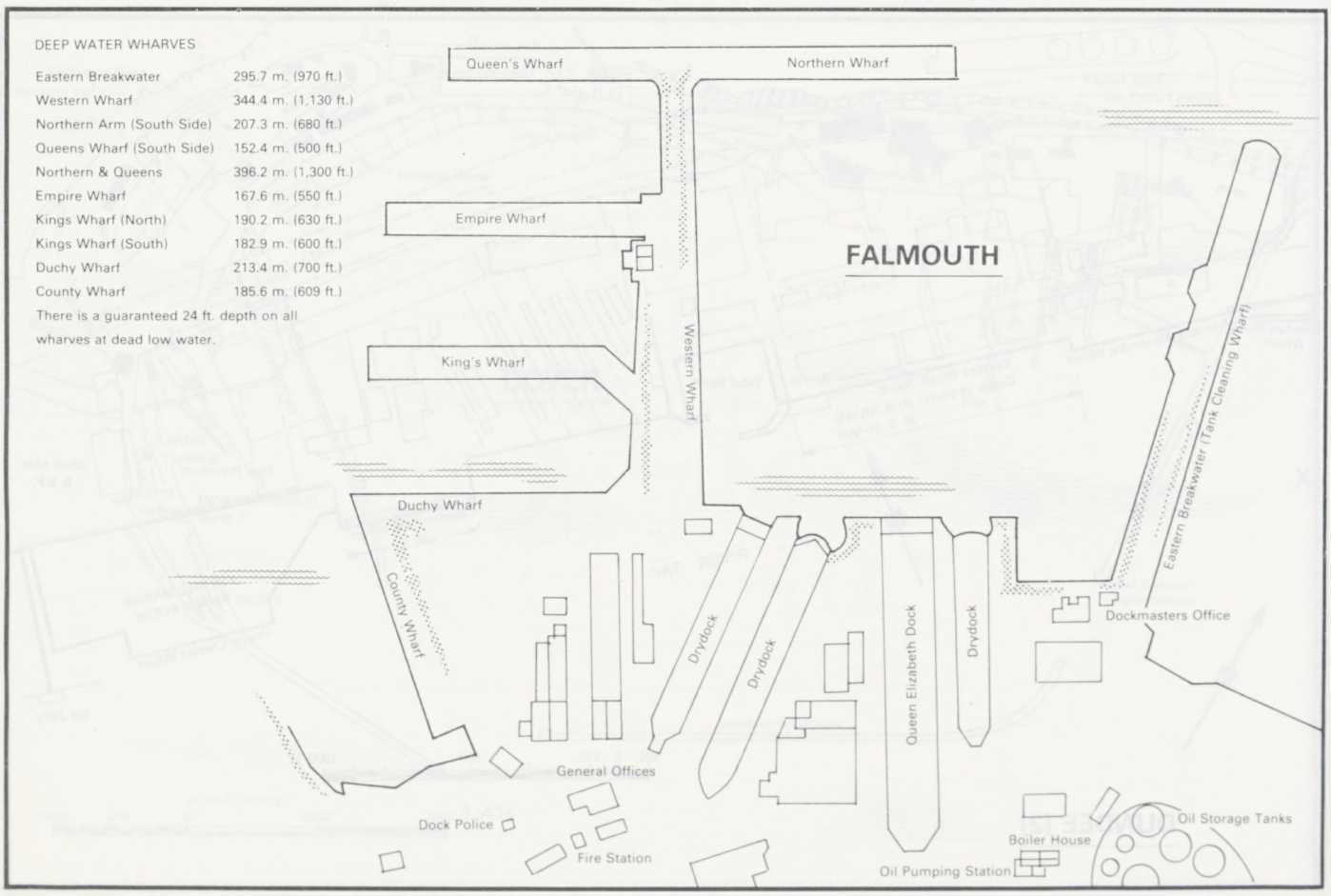
DUNDEE (2)

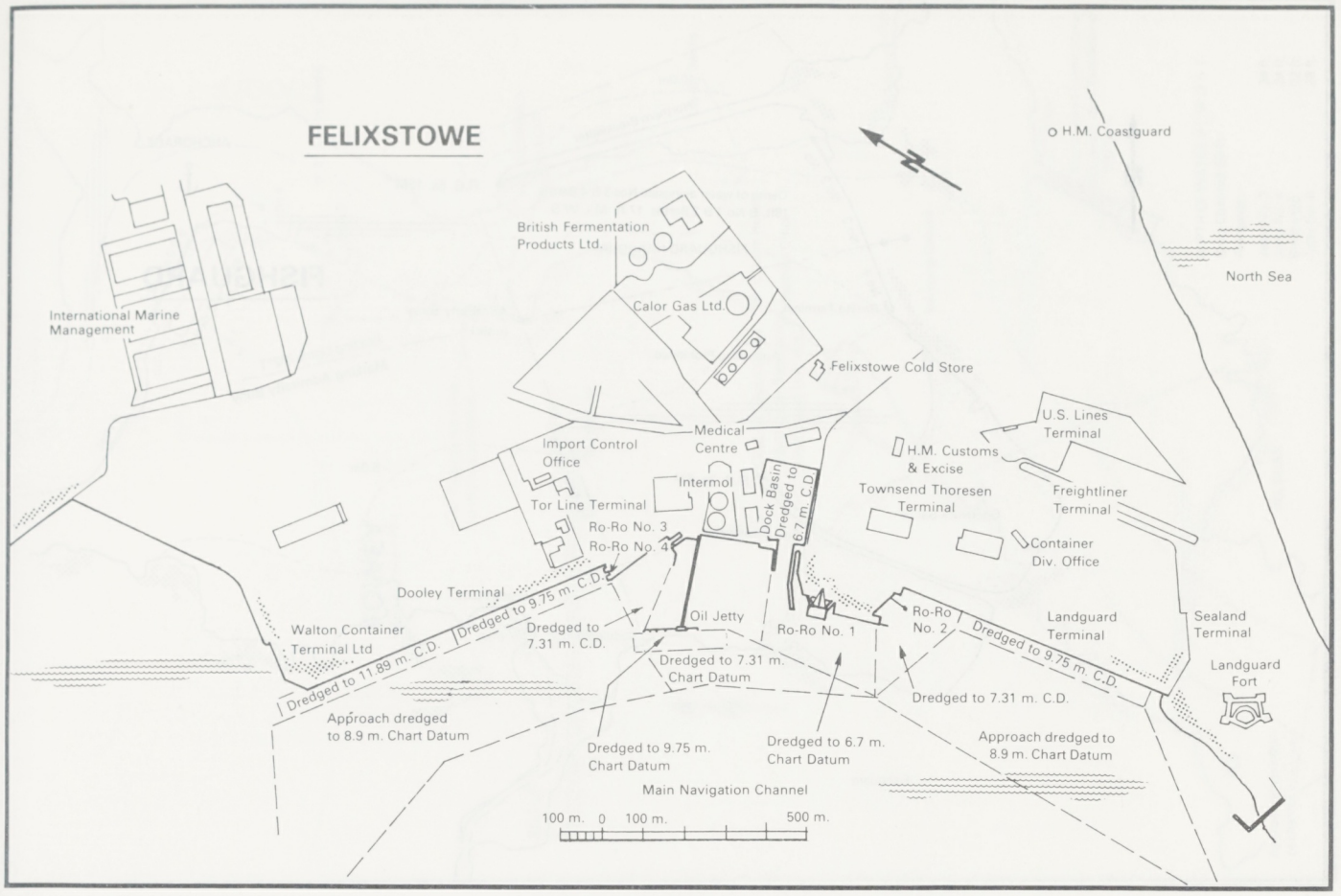


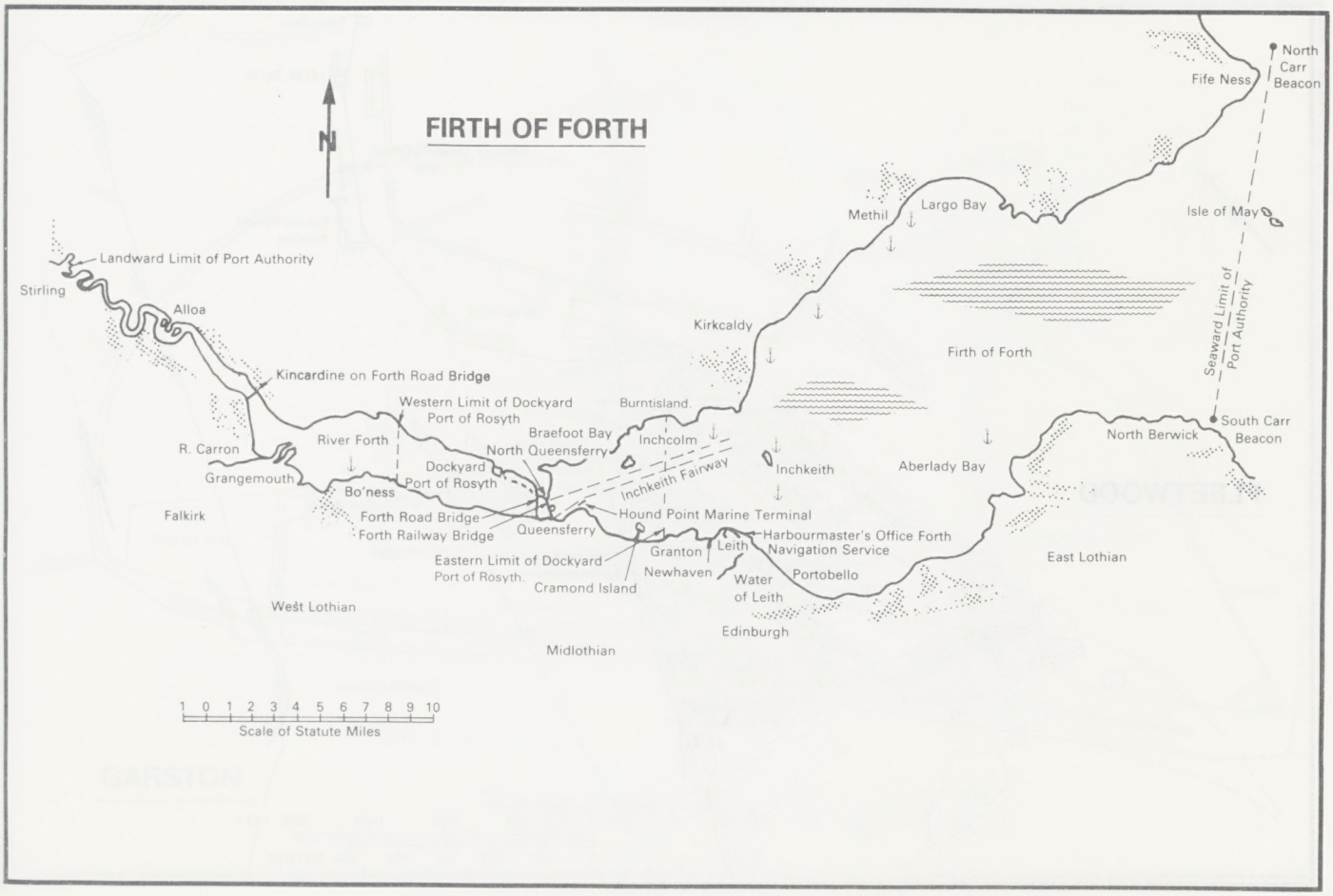
DEEP WATER WHARVES

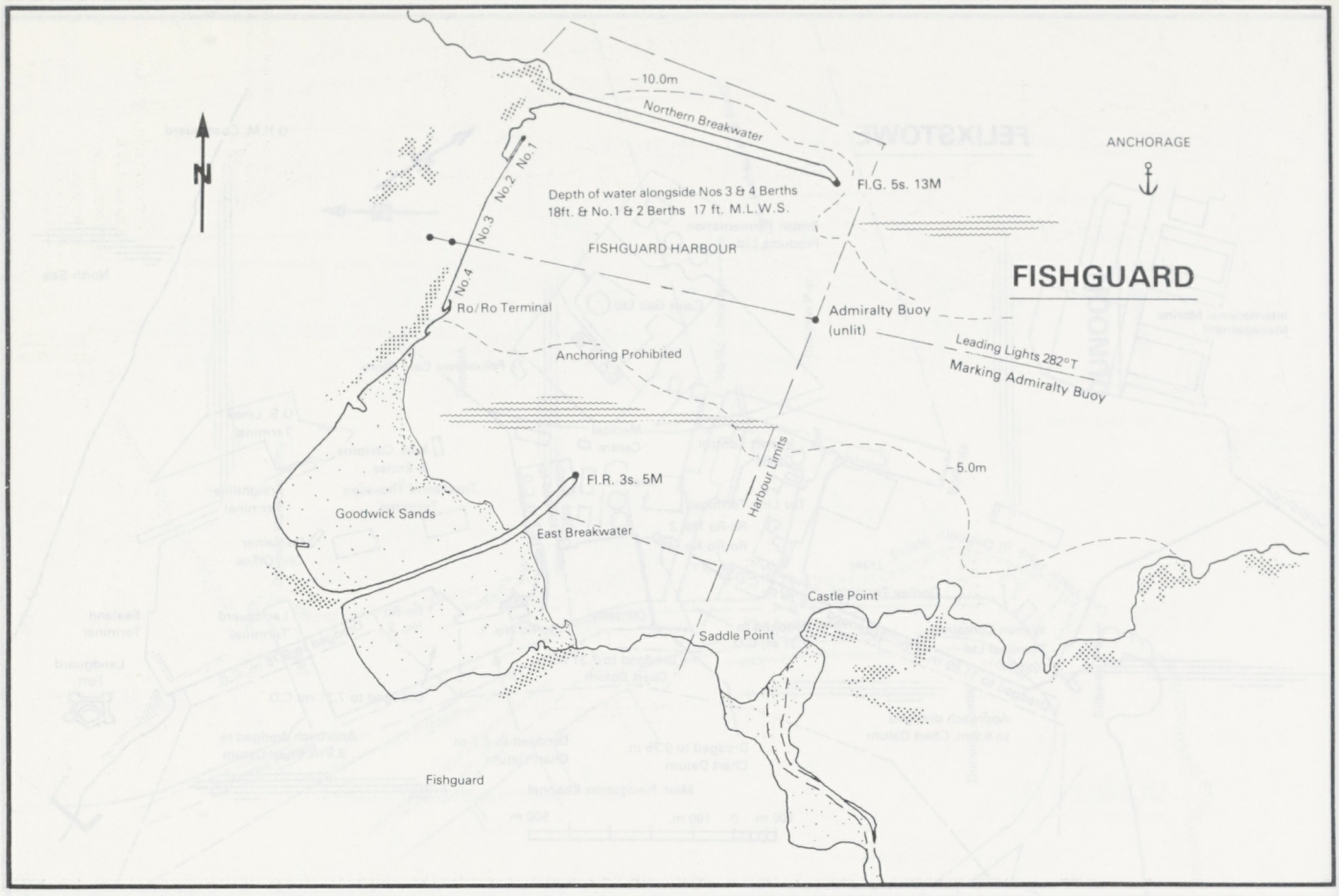
Eastern Breakwater	295.7 m. (970 ft.)
Western Wharf	344.4 m. (1,130 ft.)
Northern Arm (South Side)	207.3 m. (680 ft.)
Queens Wharf (South Side)	152.4 m. (500 ft.)
Northern & Queens	396.2 m. (1,300 ft.)
Empire Wharf	167.6 m. (550 ft.)
Kings Wharf (North)	190.2 m. (630 ft.)
Kings Wharf (South)	182.9 m. (600 ft.)
Duchy Wharf	213.4 m. (700 ft.)
County Wharf	185.6 m. (609 ft.)

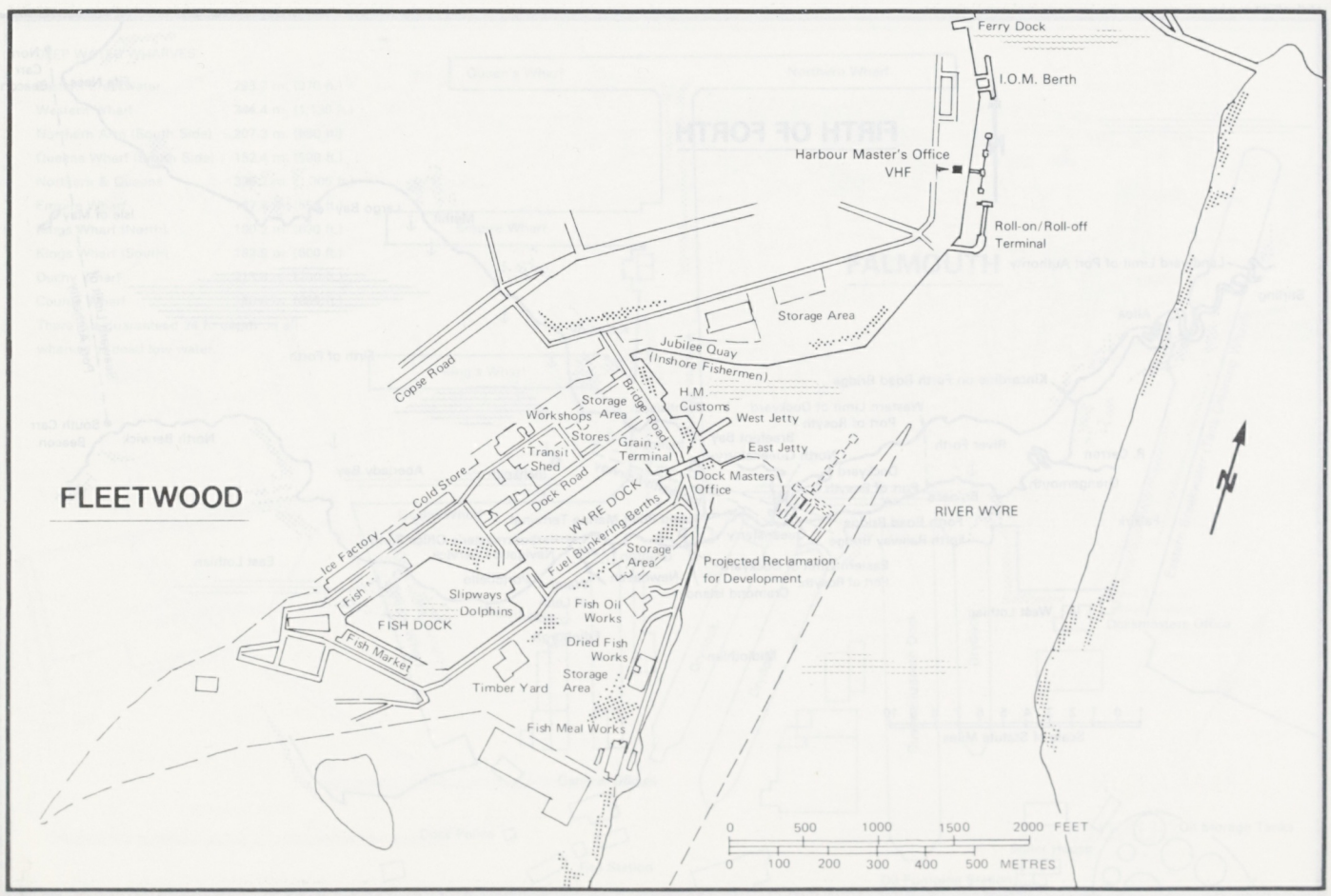
There is a guaranteed 24 ft. depth on all wharves at dead low water.

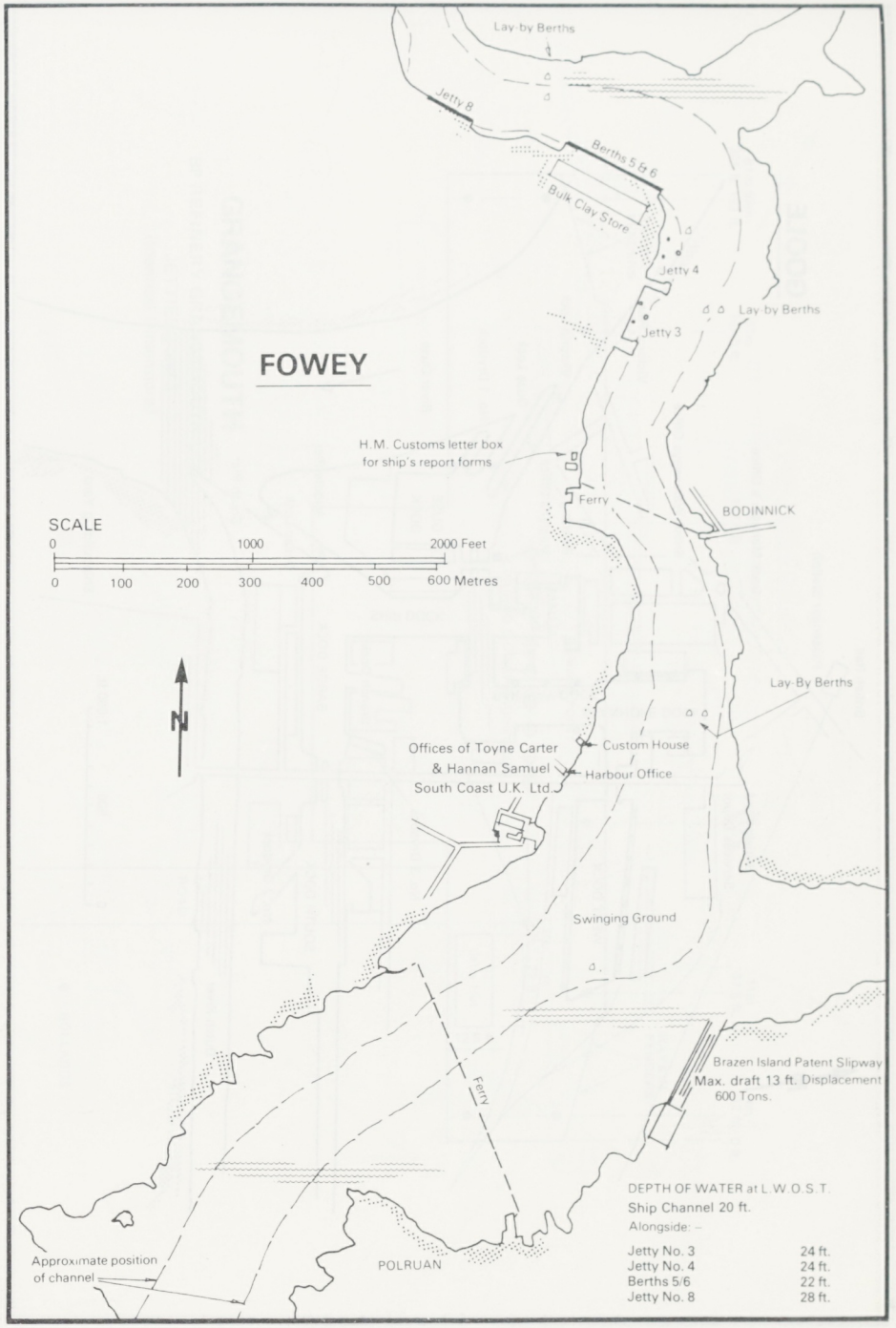


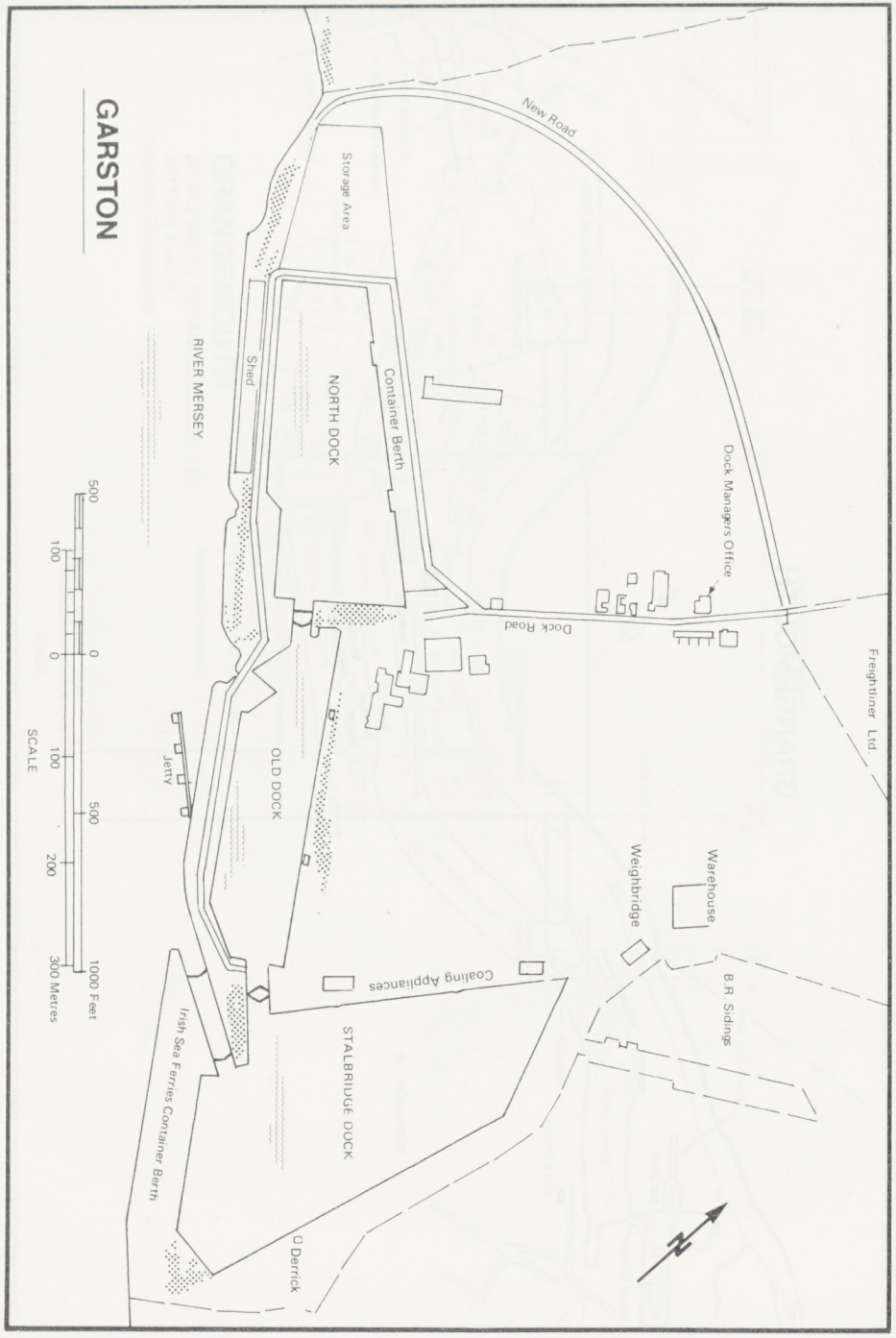

FELIXSTOWE
H.M. Coastguard
North Sea
British Fermentation Products Ltd.
Calor Gas Ltd.
Felixstowe Cold Store
International Marine Management
Medical Centre
Import Control Office
Intermol
Tor Line Terminal
Ro-Ro No. 3
Ro-Ro No. 4
Dock Basin Dredged to 6.7 m. C.D.
U.S. Lines Terminal
H.M. Customs & Excise
Townsend Thoresen Terminal
Freightliner Terminal
Container Div. Office
Dooley Terminal
Dredged to 9.75 m. C.D.
Walton Container Terminal Ltd
Dredged to 11.89 m. C.D.
Dredged to 7.31 m. C.D.
Oil Jetty
Ro-Ro No. 1
Ro-Ro No. 2
Landguard Terminal
Sealand Terminal
Landguard Fort
Dredged to 7.31 m. Chart Datum
Approach dredged to 8.9 m. Chart Datum
Dredged to 9.75 m. Chart Datum
Dredged to 6.7 m. Chart Datum
Main Navigation Channel
100 m. 0 100 m. 500 m.

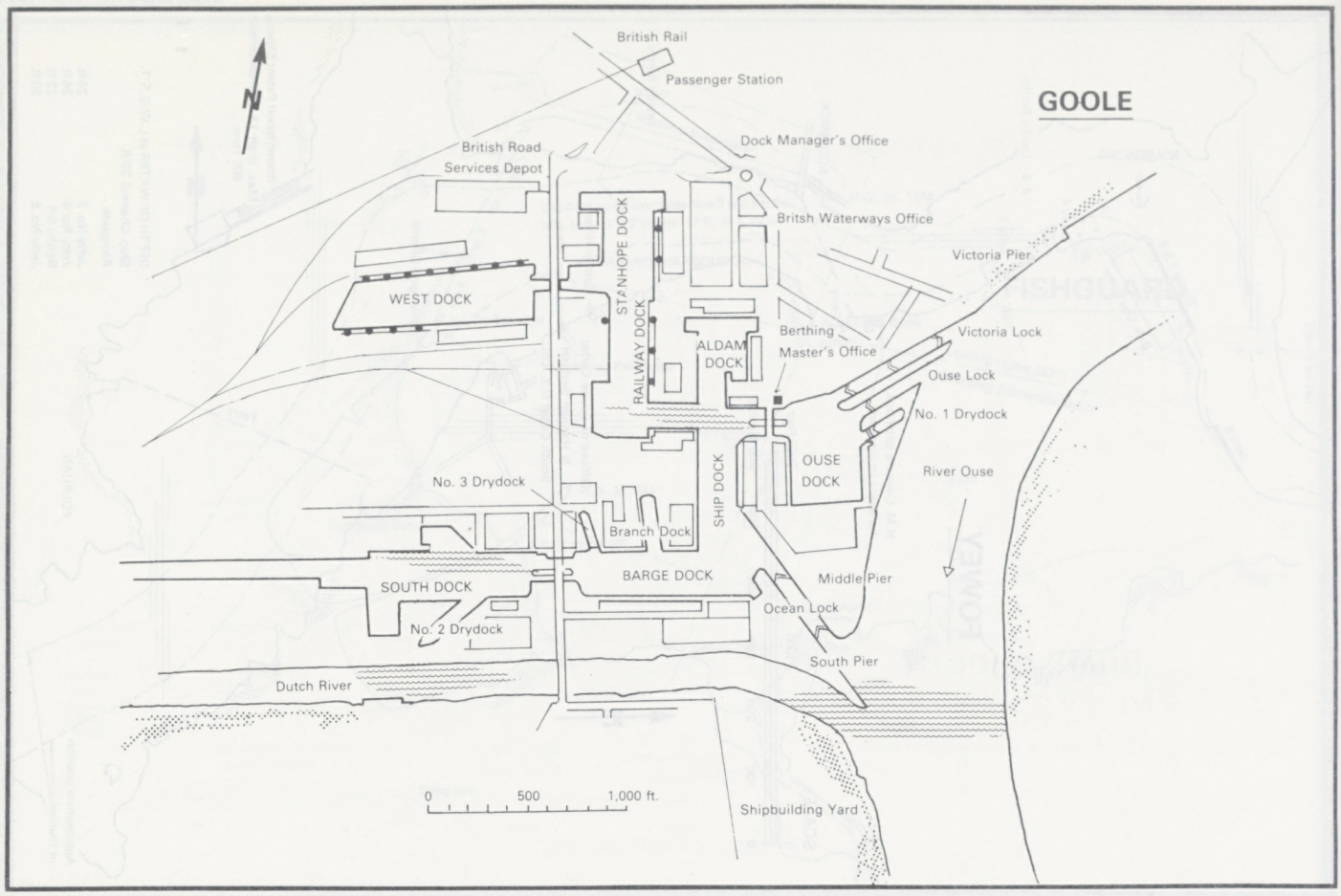

FIRTH OF FORTH
North Carr Beacon
Fife Ness
Methil
Largo Bay
Isle of May
Landward Limit of Port Authority
Stirling
Alloa
Kirkcaldy
Firth of Forth
Seaward Limit of Port Authority
Kincardine on Forth Road Bridge
Western Limit of Dockyard Port of Rosyth
Burntisland
Braefoot Bay
Inchcolm
North Queensferry
R. Carron
River Forth
Dockyard Port of Rosyth
Grangemouth
Bo'ness
Inchkeith Fairway
Inchkeith
Aberlady Bay
North Berwick
South Carr Beacon
Falkirk
Forth Road Bridge
Forth Railway Bridge
Queensferry
Hound Point Marine Terminal
Harbourmaster's Office Forth Navigation Service
Granton
Leith
Eastern Limit of Dockyard Port of Rosyth.
Newhaven
Cramond Island
Water of Leith
Portobello
East Lothian
West Lothian
Edinburgh
Midlothian
1 0 1 2 3 4 5 6 7 8 9 10
Scale of Statute Miles

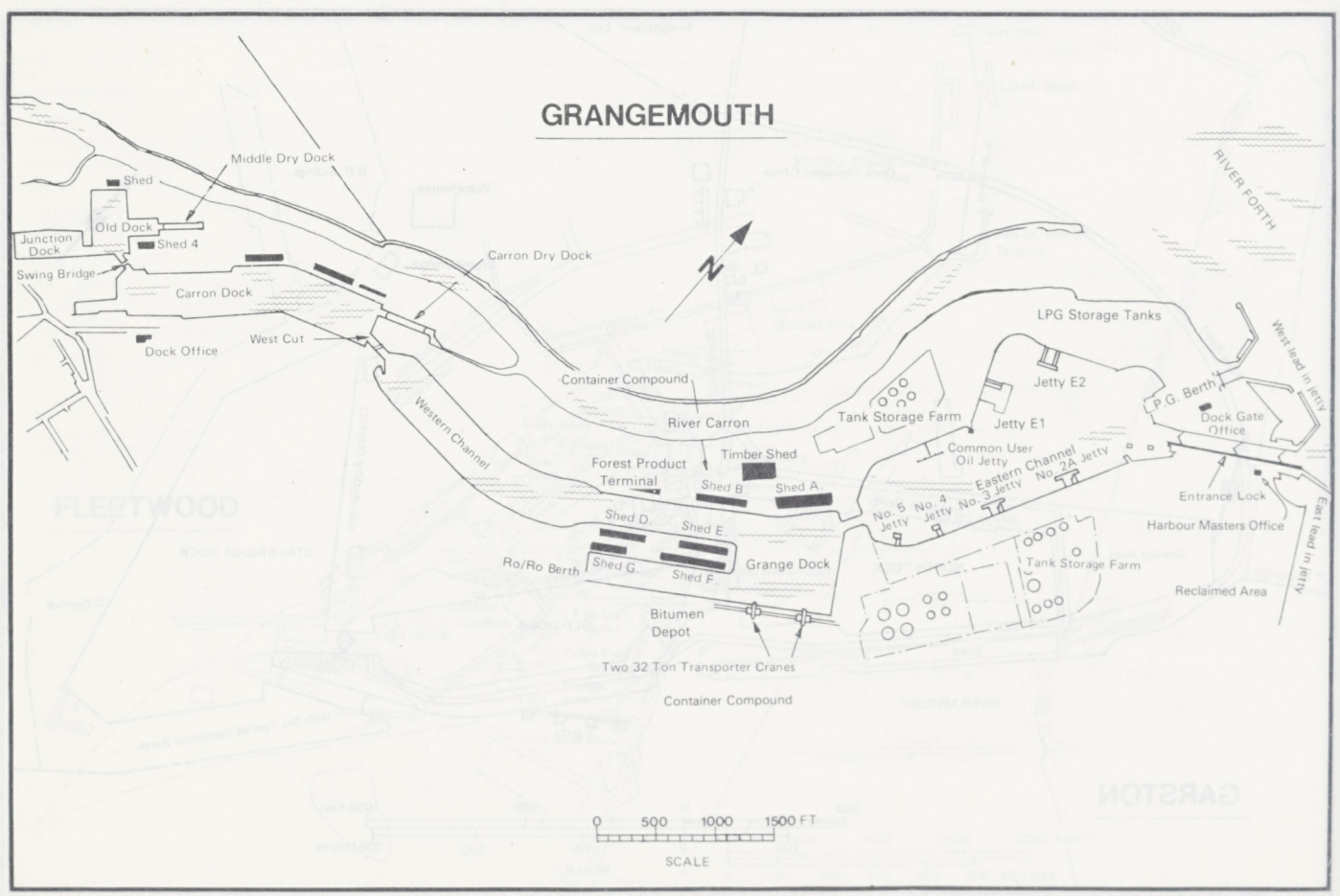

10.0m
Northern Breakwater
ANCHORAGE
Fl.G. 5s. 13M
Depth of water alongside Nos 3 & 4 Berths
18ft. & No.1 & 2 Berths 17 ft. M.L.W.S.
No.1
No.2
No.3
No.4
FISHGUARD HARBOUR
FISHGUARD
Ro/Ro Terminal
Admiralty Buoy
(unlit)
Leading Lights 282°T
Marking Admiralty Buoy
Anchoring Prohibited
Harbour Limits
5.0m
Fl.R. 3s. 5M
Goodwick Sands
East Breakwater
Castle Point
Saddle Point
Fishguard

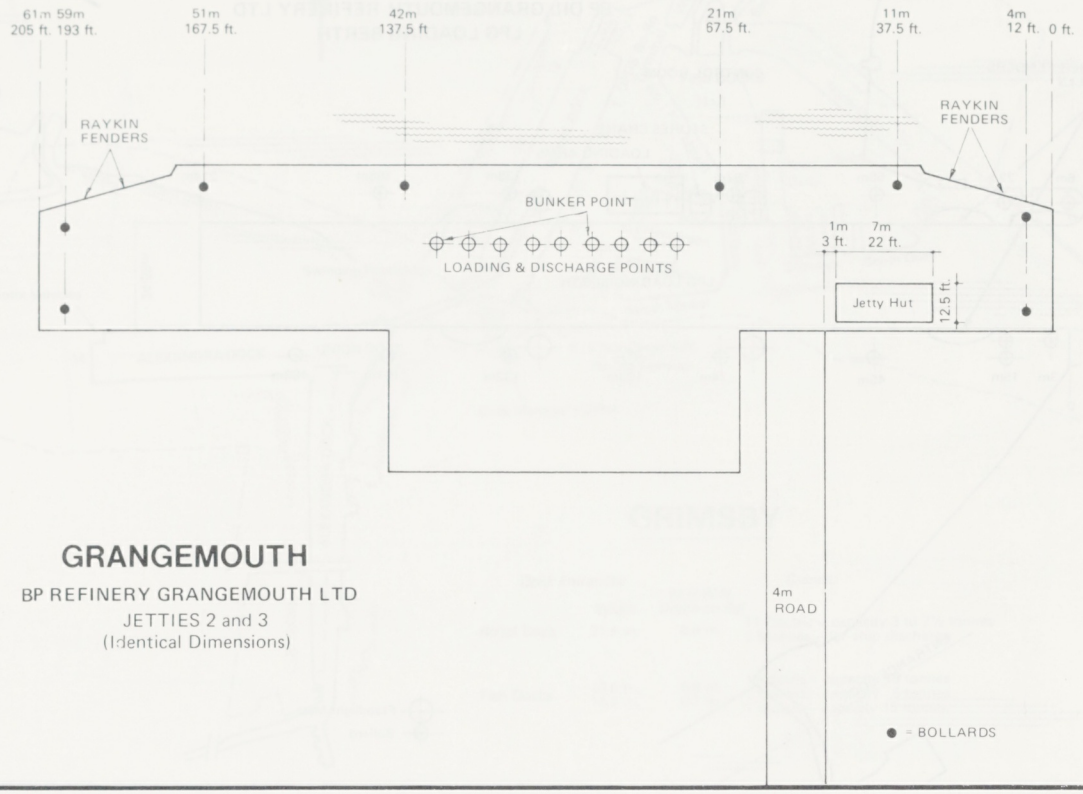

Ferry Dock
I.O.M. Berth
Harbour Master's Office
VHF
Roll-on/Roll-off
Terminal
Storage Area
Jubilee Quay
(Inshore Fishermen)
Copse Road
Bridge Road
H.M.
Customs
West Jetty
East Jetty
Workshops
Storage
Area
Stores
Transit
Shed
Grain
Terminal
Dock Masters
Office
FLEETWOOD
Cold Store
Dock Road
WYRE DOCK
RIVER WYRE
Ice Factory
Fuel Bunkering Berths
Storage
Area
Projected Reclamation
for Development
Fish
Slipways
Dolphins
Fish Oil
Works
FISH DOCK
Fish Market
Dried Fish
Works
Timber Yard
Storage
Area
Fish Meal Works
0 500 1000 1500 2000 FEET
0 100 200 300 400 500 METRES


FOWEY
Lay-by Berths
Jetty 8
Berths 5 & 6
Bulk Clay Store
Jetty 4
Jetty 3
Lay-by Berths
H.M. Customs letter box for ship's report forms
Ferry
BODINNICK
SCALE
0 1000 2000 Feet
0 100 200 300 400 500 600 Metres
N
Lay-By Berths
Offices of Toyne Carter & Hannan Samuel South Coast U.K. Ltd.
Custom House
Harbour Office
Swinging Ground
Ferry
Brazen Island Patent Slipway
Max. draft 13 ft. Displacement 600 Tons.
DEPTH OF WATER at L.W.O.S.T.
Ship Channel 20 ft.
Alongside: –
Jetty No. 3 24 ft.
Jetty No. 4 24 ft.
Berths 5/6 22 ft.
Jetty No. 8 28 ft.
Approximate position of channel
POLRUAN


GARSTON
New Road
Storage Area
Shed
NORTH DOCK
Container Berth
RIVER MERSEY
Dock Managers Office
Dock Road
Freightliner Ltd.
Jetty
OLD DOCK
Weighbridge
Warehouse
B.R. Sidings
Coaling Appliances
STALBRIDGE DOCK
Irish Sea Ferries Container Berth
Derrick
N
SCALE
500 0 100 0 100 500 200 1000 Feet
300 Metres

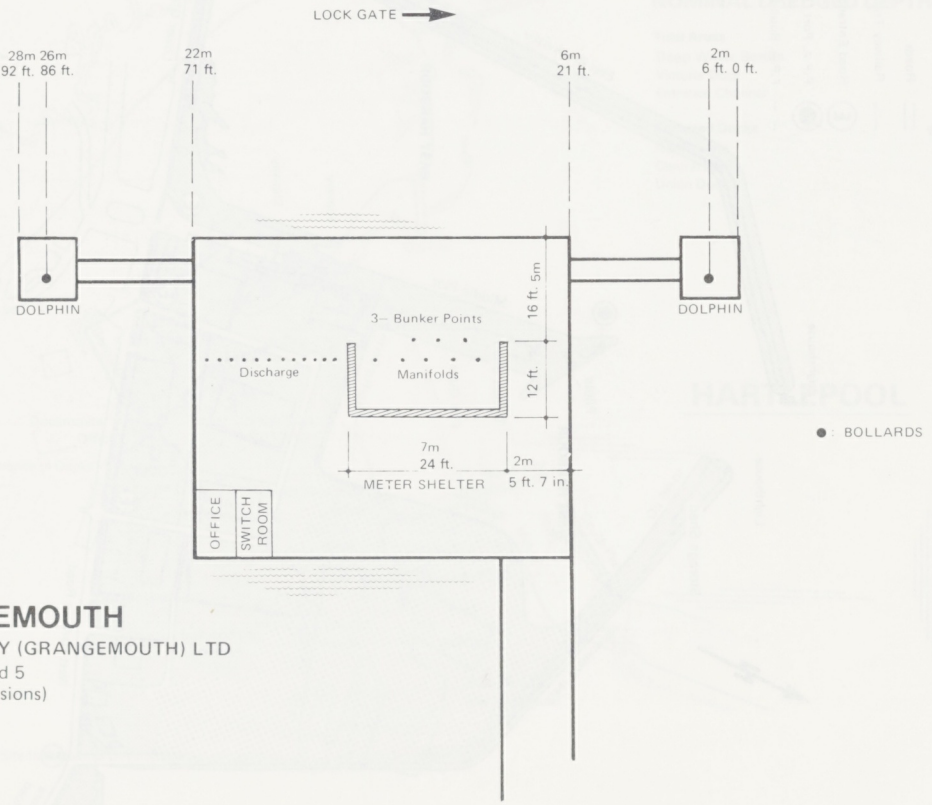

GOOLE
British Rail
Passenger Station
Dock Manager's Office
British Road
Services Depot
British Waterways Office
Victoria Pier
WEST DOCK
STANHOPE DOCK
RAILWAY DOCK
ALDAM DOCK
Berthing
Master's Office
Victoria Lock
Ouse Lock
No. 1 Drydock
OUSE DOCK
River Ouse
No. 3 Drydock
SHIP DOCK
Branch Dock
BARGE DOCK
SOUTH DOCK
Middle Pier
Ocean Lock
No. 2 Drydock
South Pier
Dutch River
0 500 1,000 ft.
Shipbuilding Yard


GRANGEMOUTH
Middle Dry Dock
Shed
Old Dock
Junction Dock
Shed 4
Swing Bridge
Carron Dry Dock
Carron Dock
Dock Office
West Cut
Western Channel
Container Compound
River Carron
Forest Product Terminal
Timber Shed
Shed B.
Shed A.
Shed D.
Shed E.
Ro/Ro Berth
Shed G.
Shed F.
Grange Dock
Bitumen Depot
Two 32 Ton Transporter Cranes
Container Compound
LPG Storage Tanks
Tank Storage Farm
Jetty E2
Jetty E1
Common User Oil Jetty
Eastern Channel
No. 5 Jetty
No. 4 Jetty
No. 3 Jetty
No. 2A Jetty
P.G. Berth
Dock Gate Office
Entrance Lock
Harbour Masters Office
Tank Storage Farm
Reclaimed Area
West lead in jetty
East lead in jetty
RIVER FORTH
0 500 1000 1500 FT
SCALE



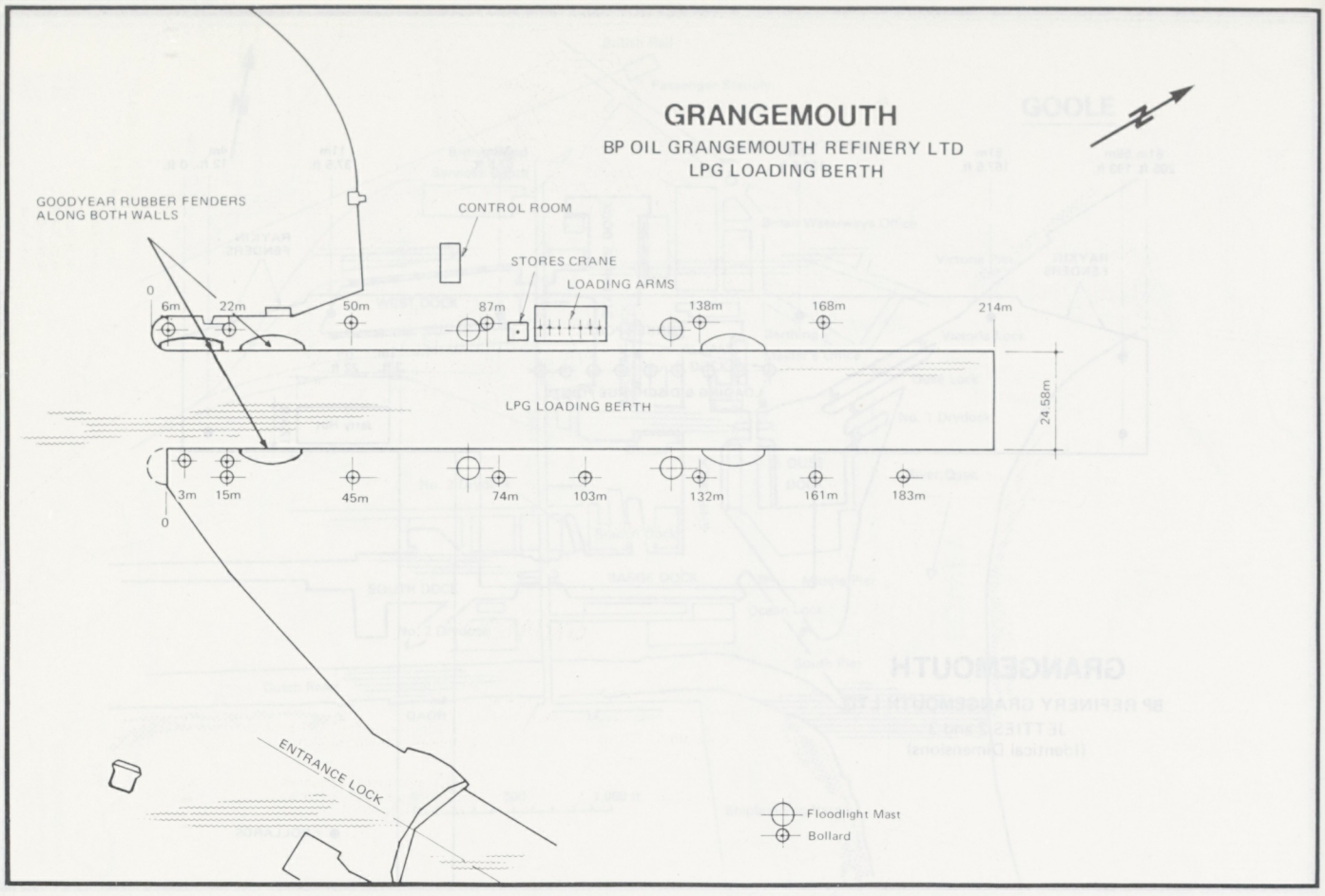
GRANGEMOUTH

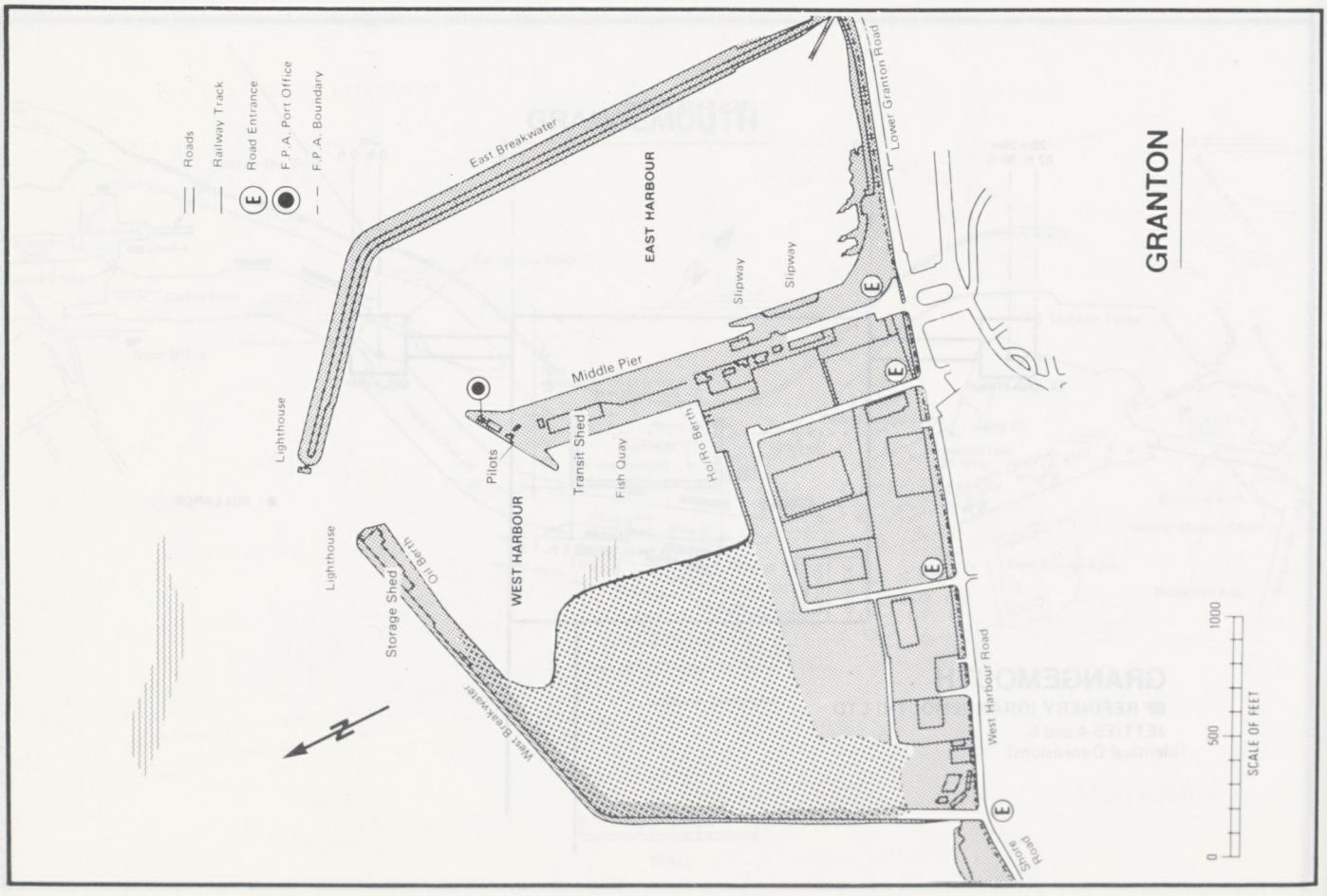
BP REFINERY GRANGEMOUTH LTD
JETTIES 2 and 3
(Identical Dimensions)

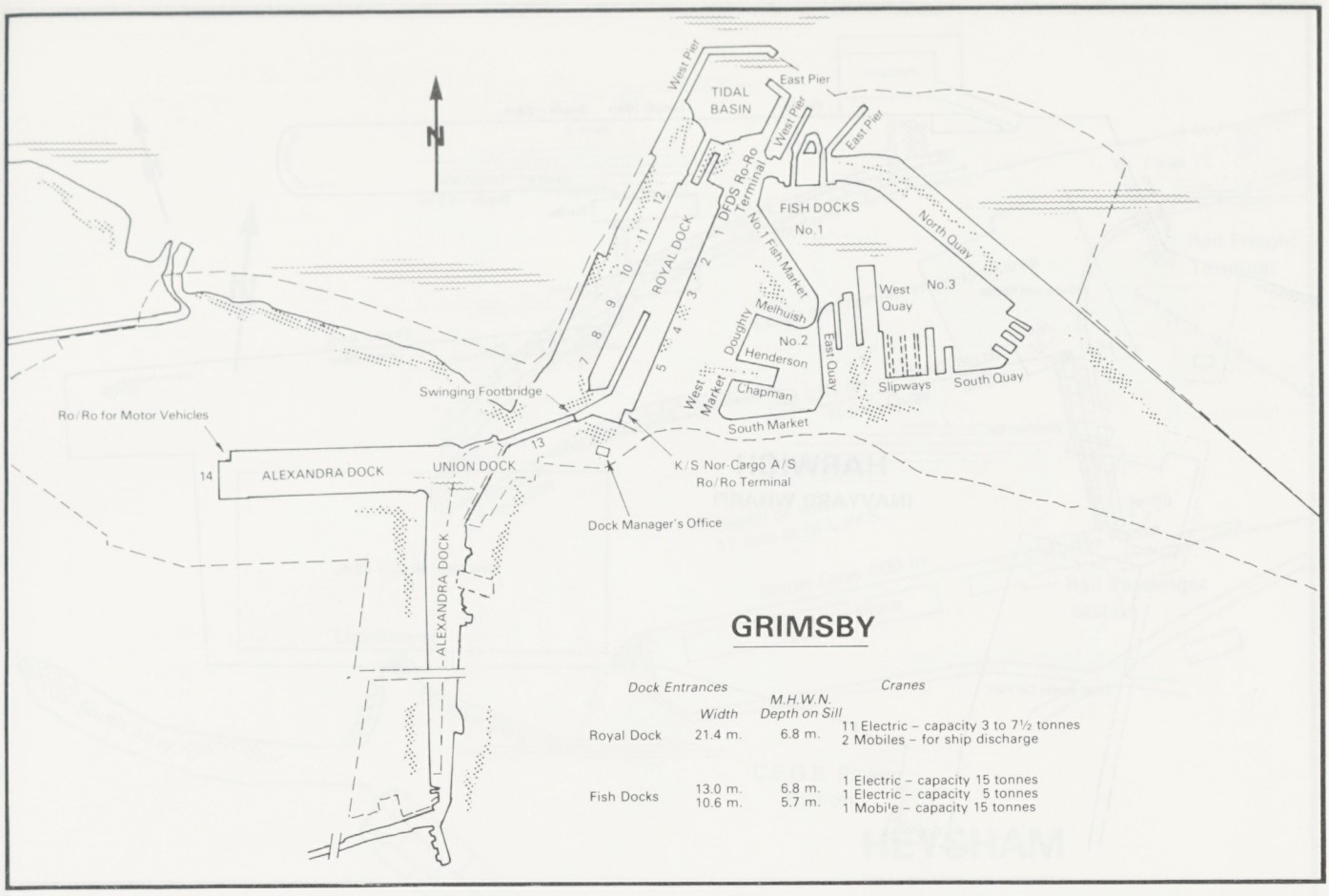


GRANGEMOUTH

BP REFINERY (GRANGEMOUTH) LTD
JETTIES 4 and 5
(Identical Dimensions)

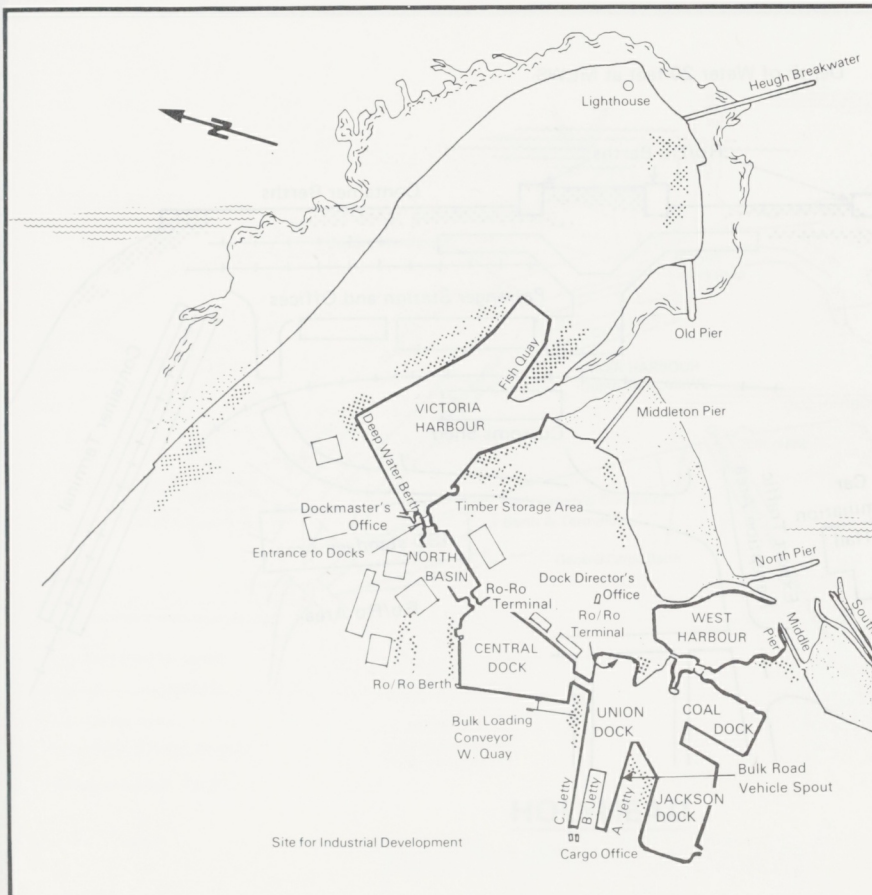

GRANGEMOUTH
BP OIL GRANGEMOUTH REFINERY LTD
LPG LOADING BERTH
GOODYEAR RUBBER FENDERS ALONG BOTH WALLS
CONTROL ROOM
STORES CRANE
LOADING ARMS
0
6m
22m
50m
87m
138m
168m
214m
LPG LOADING BERTH
24 58m
3m
15m
45m
74m
103m
132m
161m
183m
0
ENTRANCE LOCK
Floodlight Mast
Bollard


GRANTON
Roads
Railway Track
Road Entrance
F.P.A. Port Office
F.P.A. Boundary
East Breakwater
EAST HARBOUR
Lower Granton Road
Slipway
Slipway
Middle Pier
Lighthouse
Pilots
Transit Shed
Fish Quay
Ro/Ro Berth
WEST HARBOUR
Lighthouse
Storage Shed
Oil Berth
West Breakwater
West Harbour Road
Granton Road
1000
500
0
SCALE OF FEET



GRIMSBY

	Dock Entrances		Cranes
	Width	M.H.W.N. Depth on Sill	
Royal Dock	21.4 m.	6.8 m.	11 Electric – capacity 3 to 7½ tonnes 2 Mobiles – for ship discharge
Fish Docks	13.0 m. 10.6 m.	6.8 m. 5.7 m.	1 Electric – capacity 15 tonnes 1 Electric – capacity 5 tonnes 1 Mobile – capacity 15 tonnes

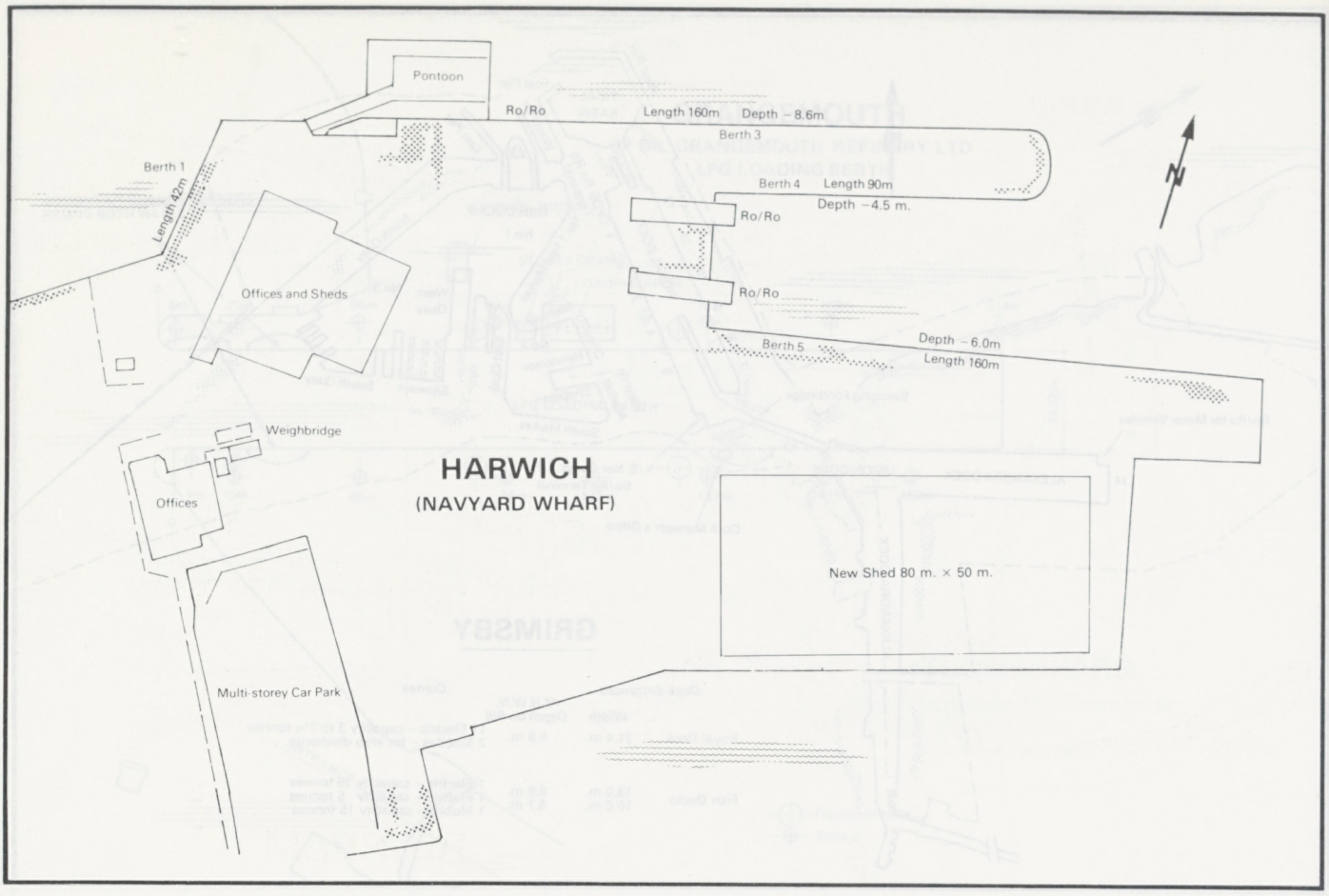


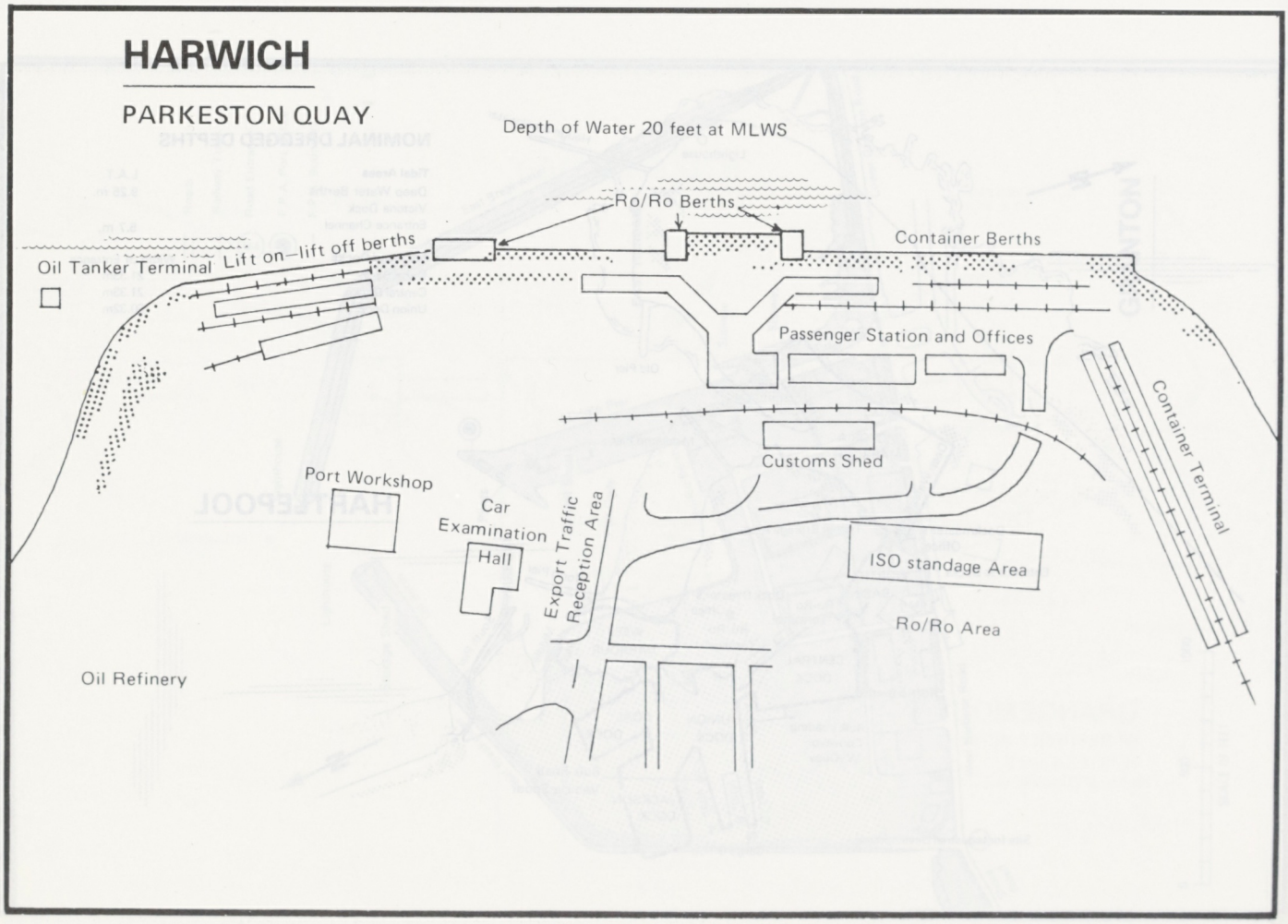
HARTLEPOOL

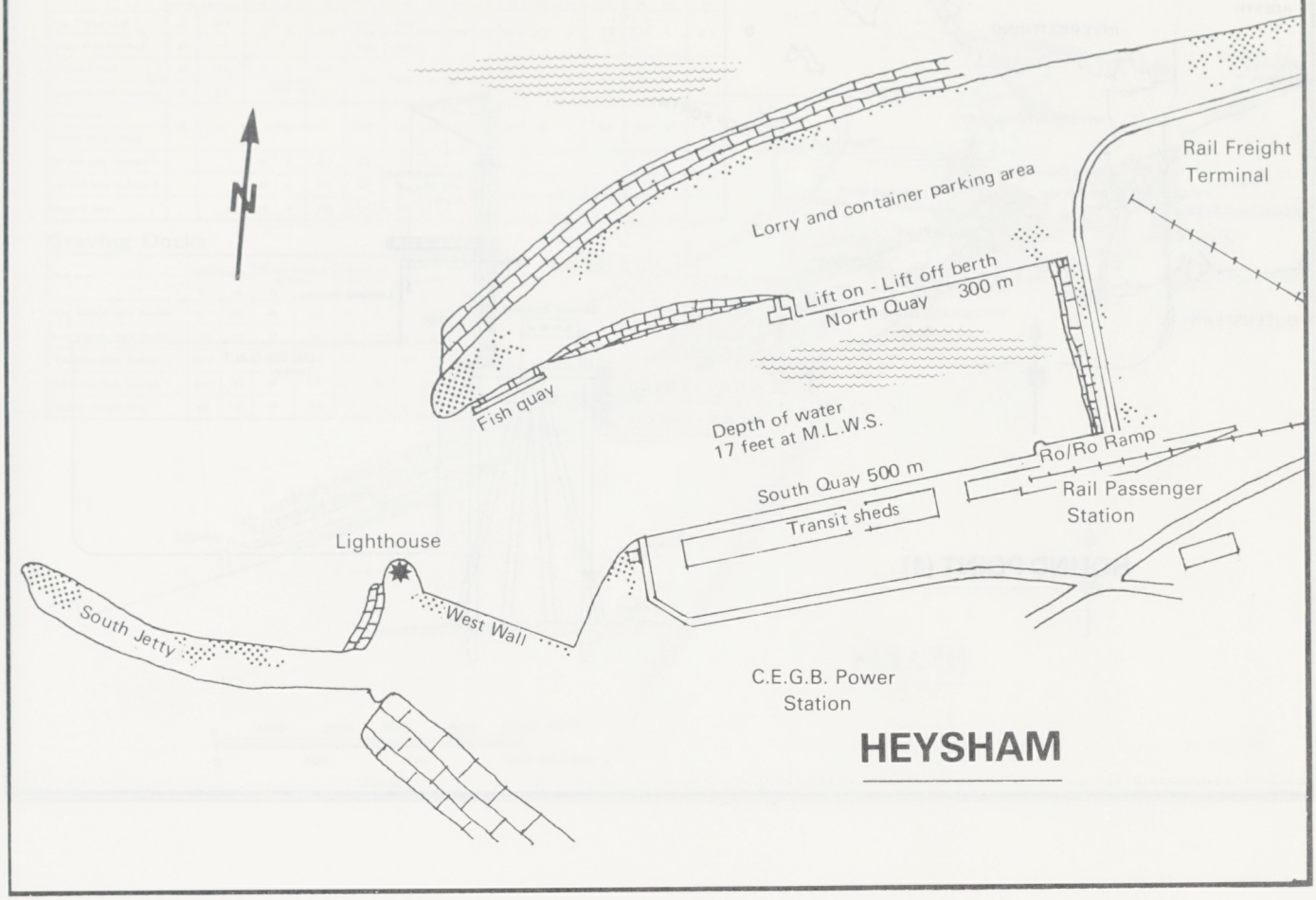
NOMINAL DREDGED DEPTHS

Tidal Areas	L.A.T.
Deep Water Berths	9.25 m.
Victoria Dock Entrance Channel	5.7 m.

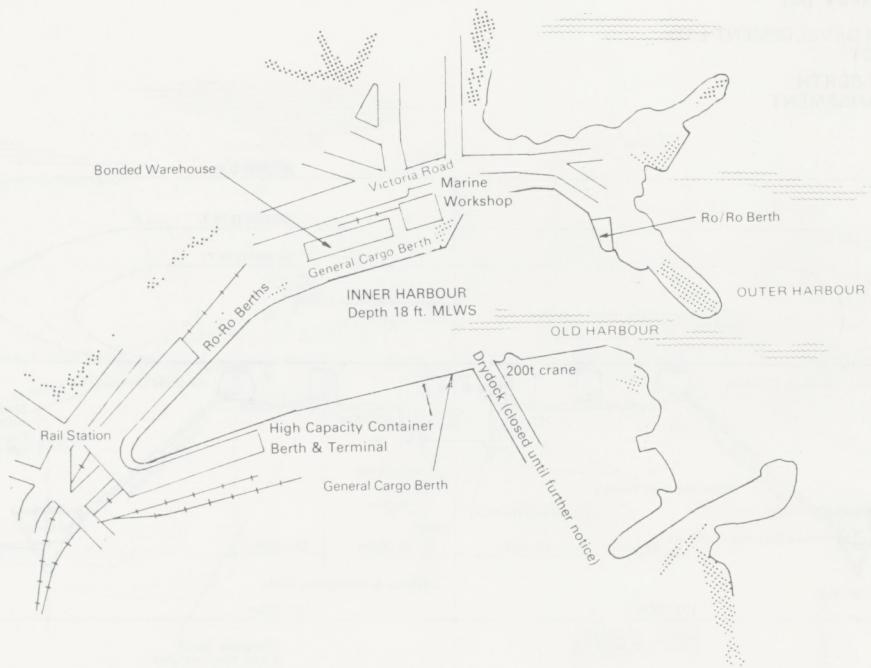
Enclosed Docks	Width of Entrance
North Basin	21.33m
Central Docks	21.33m
Union Dock	20.32m


Pontoon
Ro/Ro
Length 160m
Depth – 8.6m
Berth 3
Berth 1
Length 42m
Berth 4
Length 90m
Depth – 4.5 m.
Ro/Ro
Ro/Ro
Offices and Sheds
Berth 5
Depth – 6.0m
Length 160m
Weighbridge
HARWICH
(NAVYARD WHARF)
Offices
New Shed 80 m. × 50 m.
Multi-storey Car Park

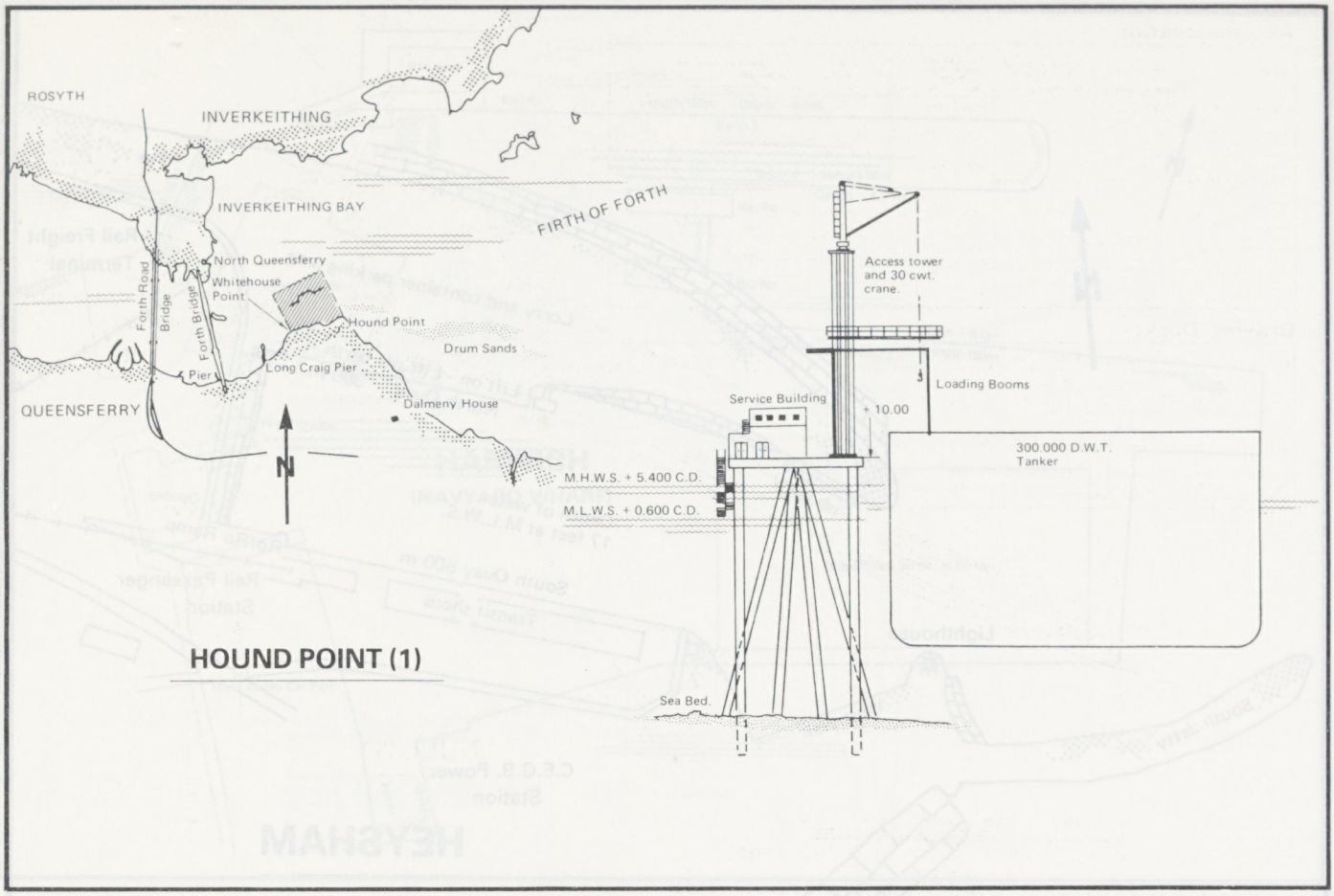

HARWICH
PARKESTON QUAY
Depth of Water 20 feet at MLWS
Ro/Ro Berths
Container Berths
Oil Tanker Terminal
Lift on–lift off berths
Passenger Station and Offices
Container Terminal
Customs Shed
Port Workshop
Car Examination Hall
Export Traffic Reception Area
ISO standage Area
Ro/Ro Area
Oil Refinery



HEYSHAM



HOLYHEAD

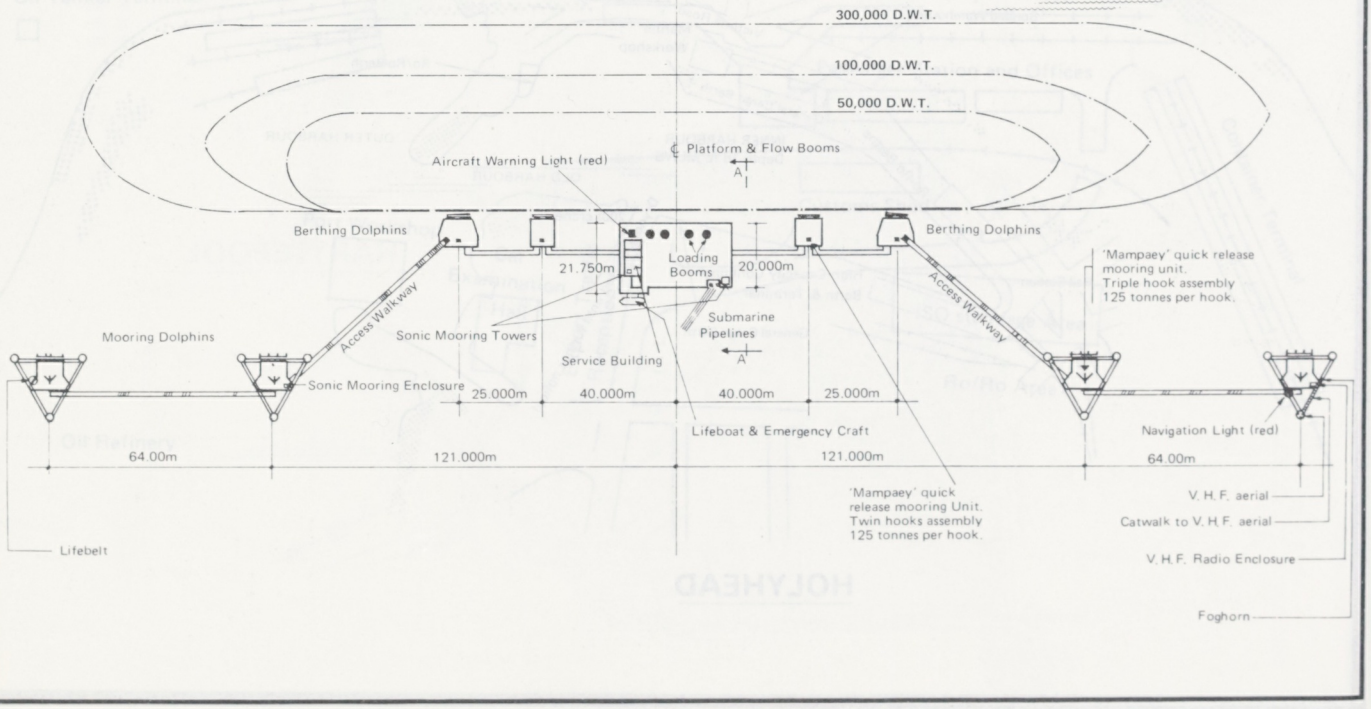


HOUND POINT (1)

HOUND POINT (2)

B.P. PETROLEUM DEVELOPMENT LTD.
FORTIES PROJECT

FORTH TANKER BERTH
GENERAL ARRANGEMENT

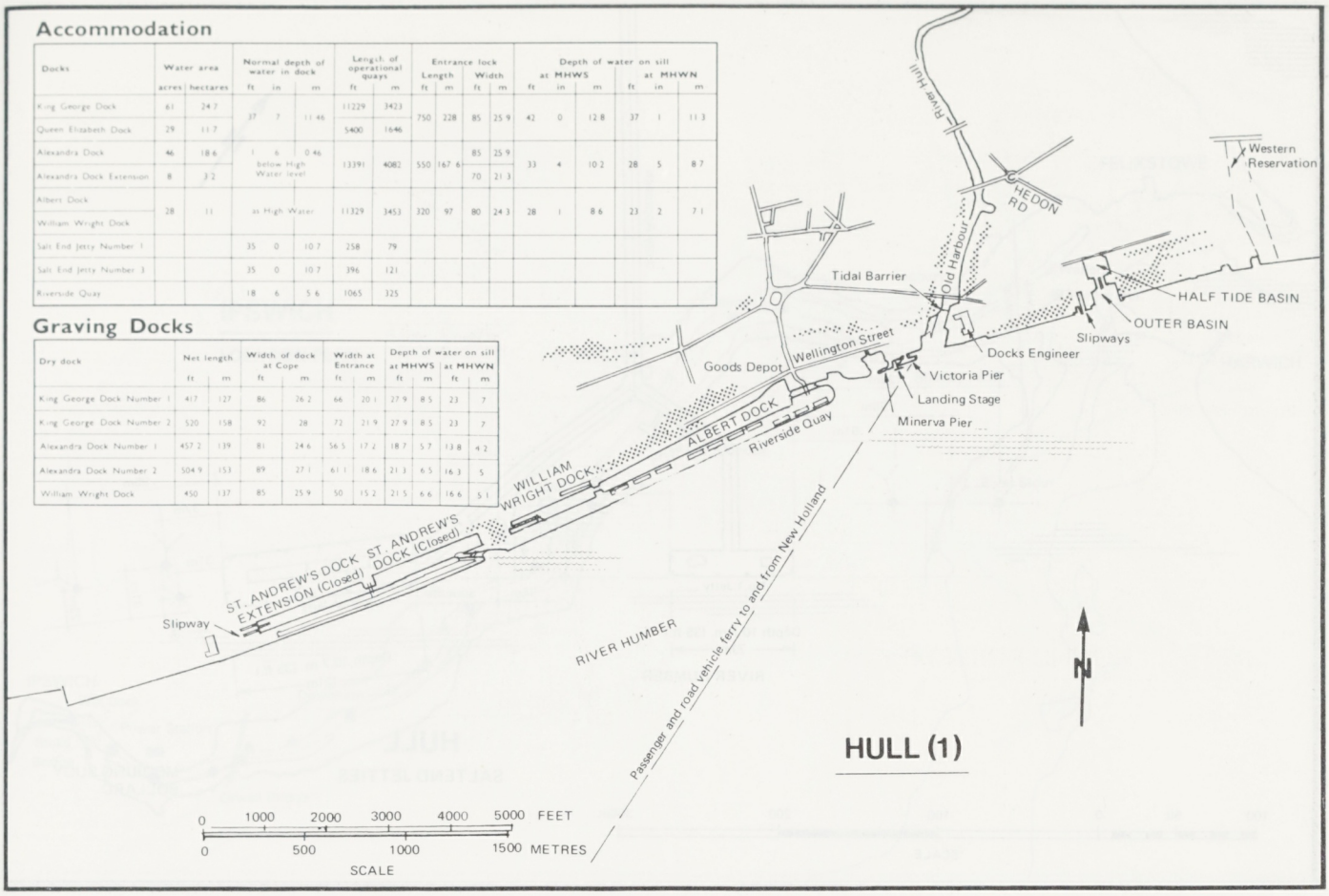


Accommodation

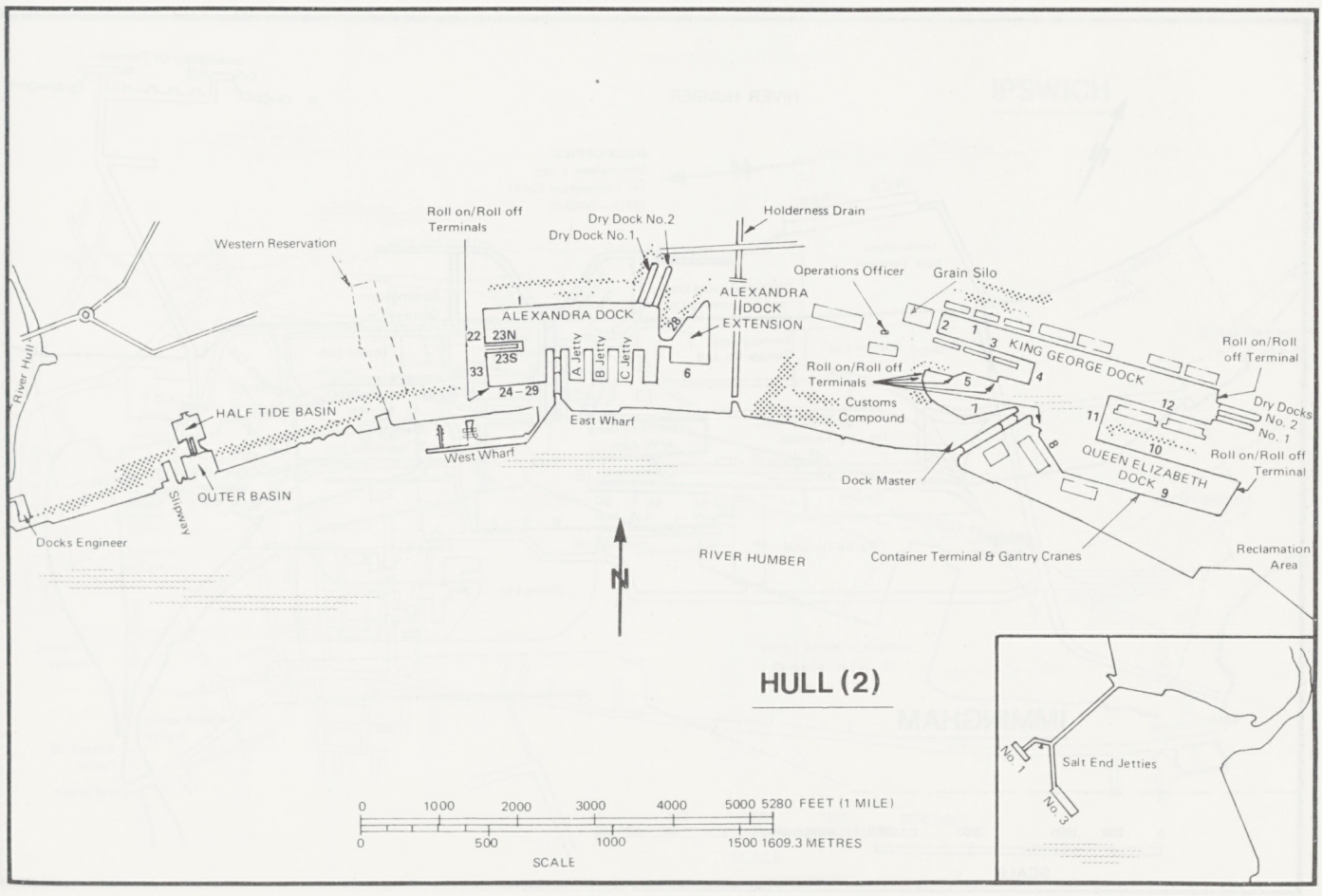
Docks	Water area		Normal depth of water in dock			Length of operational quays		Entrance lock Length		Entrance lock Width		Depth of water on sill at MHWS			Depth of water on sill at MHWN		
	acres	hectares	ft	in	m	ft	m	ft	m	ft	m	ft	in	m	ft	in	m
King George Dock	61	24.7	37	7	11.46	11229	3423	750	228	85	25.9	42	0	12.8	37	1	11.3
Queen Elizabeth Dock	29	11.7				5400	1646										
Alexandra Dock	46	18.6	1	6	0.46	13391	4082	550	167.6	85	25.9	33	4	10.2	28	5	8.7
Alexandra Dock Extension	8	3.2	below High Water level							70	21.3						
Albert Dock	28	11	as High Water			11329	3453	320	97	80	24.3	28	1	8.6	23	2	7.1
William Wright Dock																	
Salt End Jetty Number 1			35	0	10.7	258	79										
Salt End Jetty Number 3			35	0	10.7	396	121										
Riverside Quay			18	6	5.6	1065	325										

Graving Docks

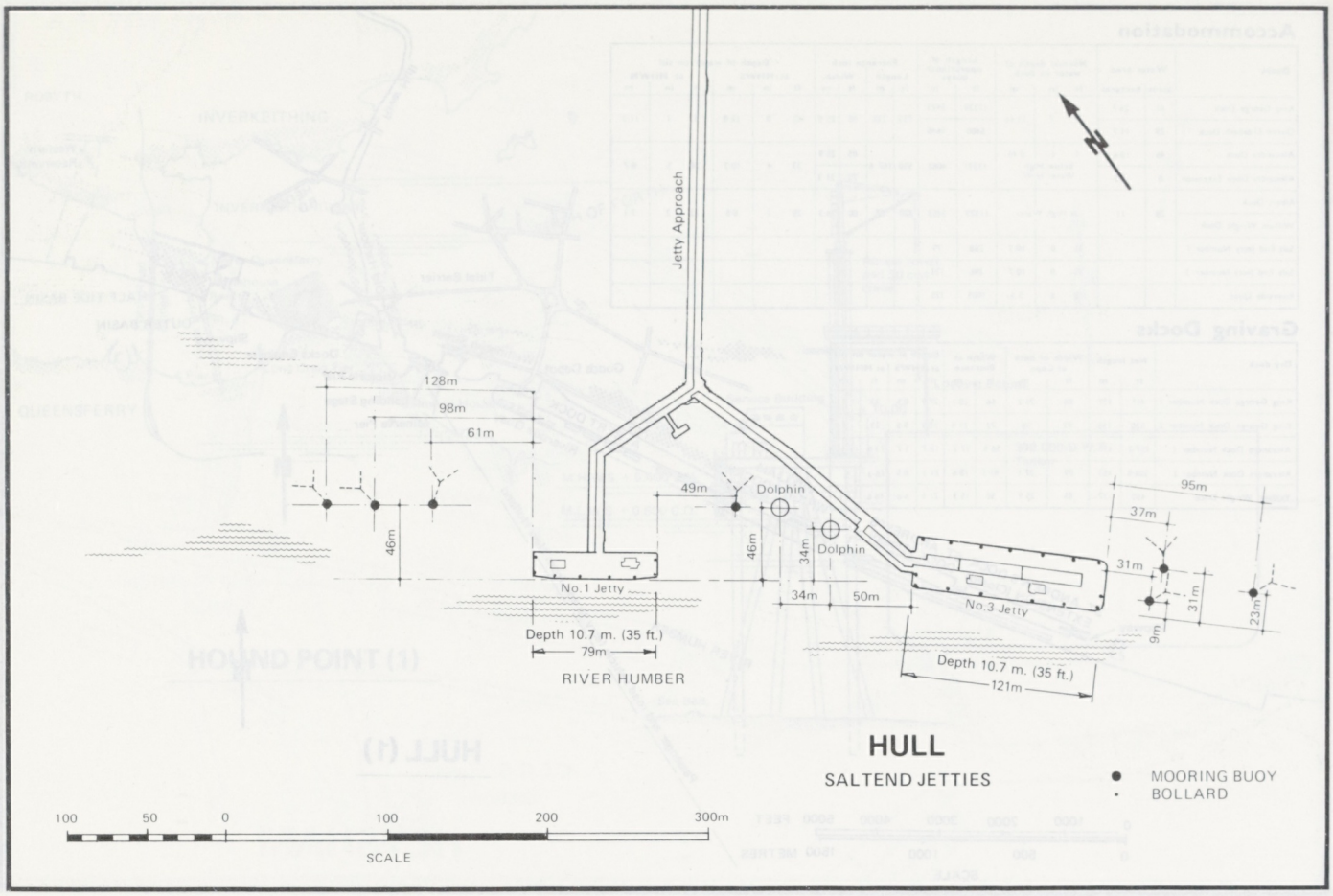
Dry dock	Net length		Width of dock at Cope		Width at Entrance		Depth of water on sill at MHWS		at MHWN	
	ft	m	ft	m	ft	m	ft	m	ft	m
King George Dock Number 1	417	127	86	26.2	66	20.1	27.9	8.5	23	7
King George Dock Number 2	520	158	92	28	72	21.9	27.9	8.5	23	7
Alexandra Dock Number 1	457.2	139	81	24.6	56.5	17.2	18.7	5.7	13.8	4.2
Alexandra Dock Number 2	504.9	153	89	27.1	61.1	18.6	21.3	6.5	16.3	5
William Wright Dock	450	137	85	25.9	50	15.2	21.5	6.6	16.6	5.1

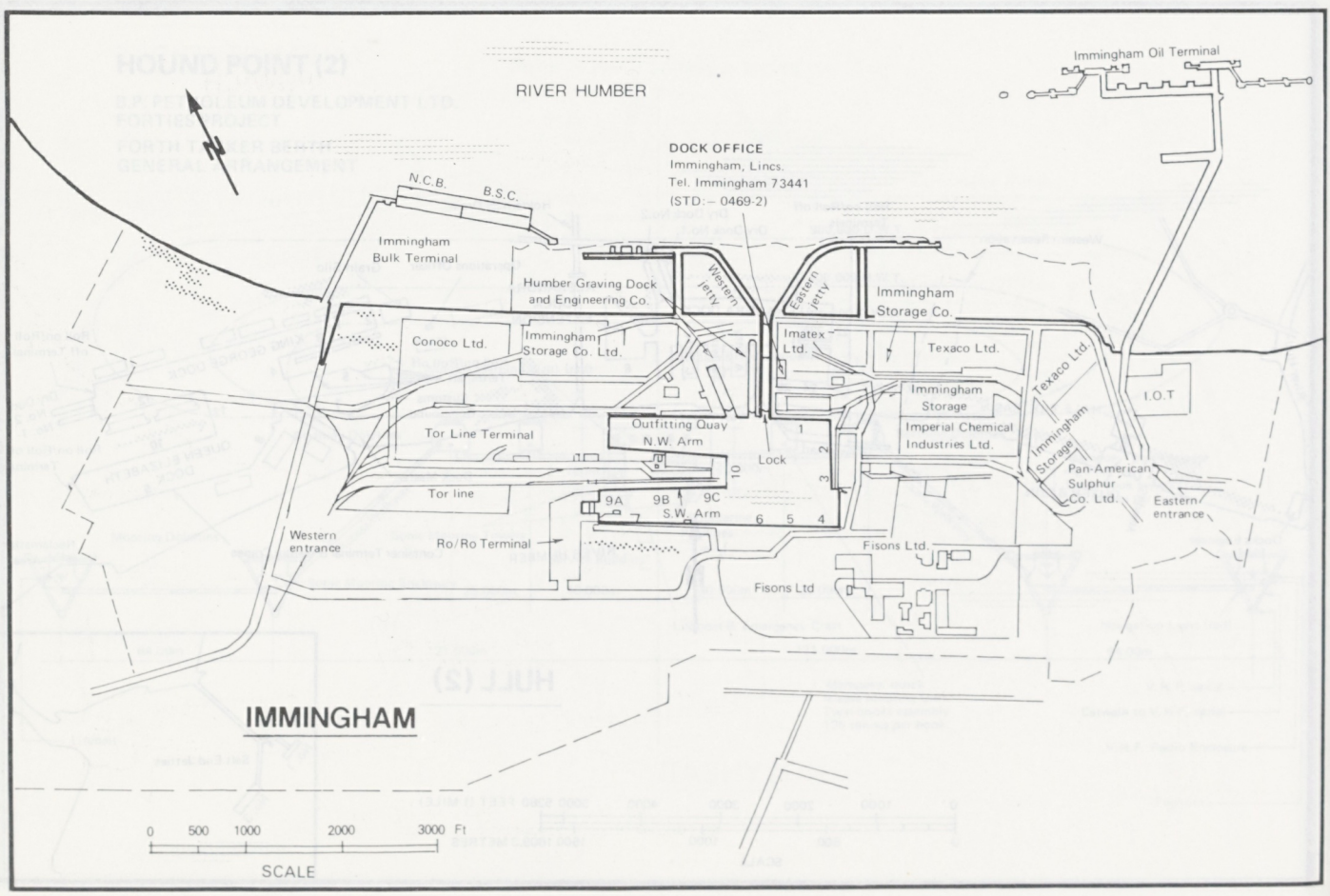


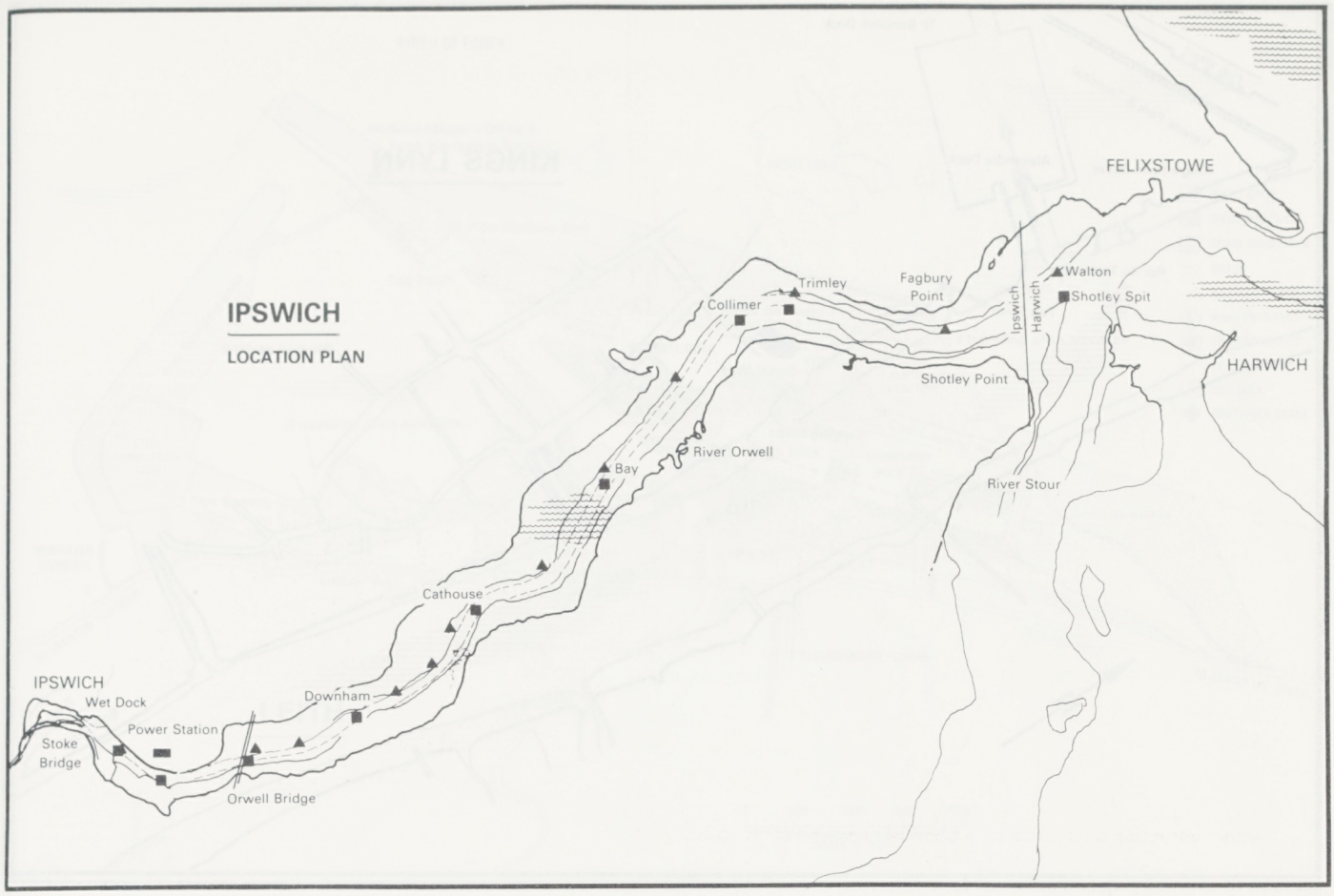
HULL (1)

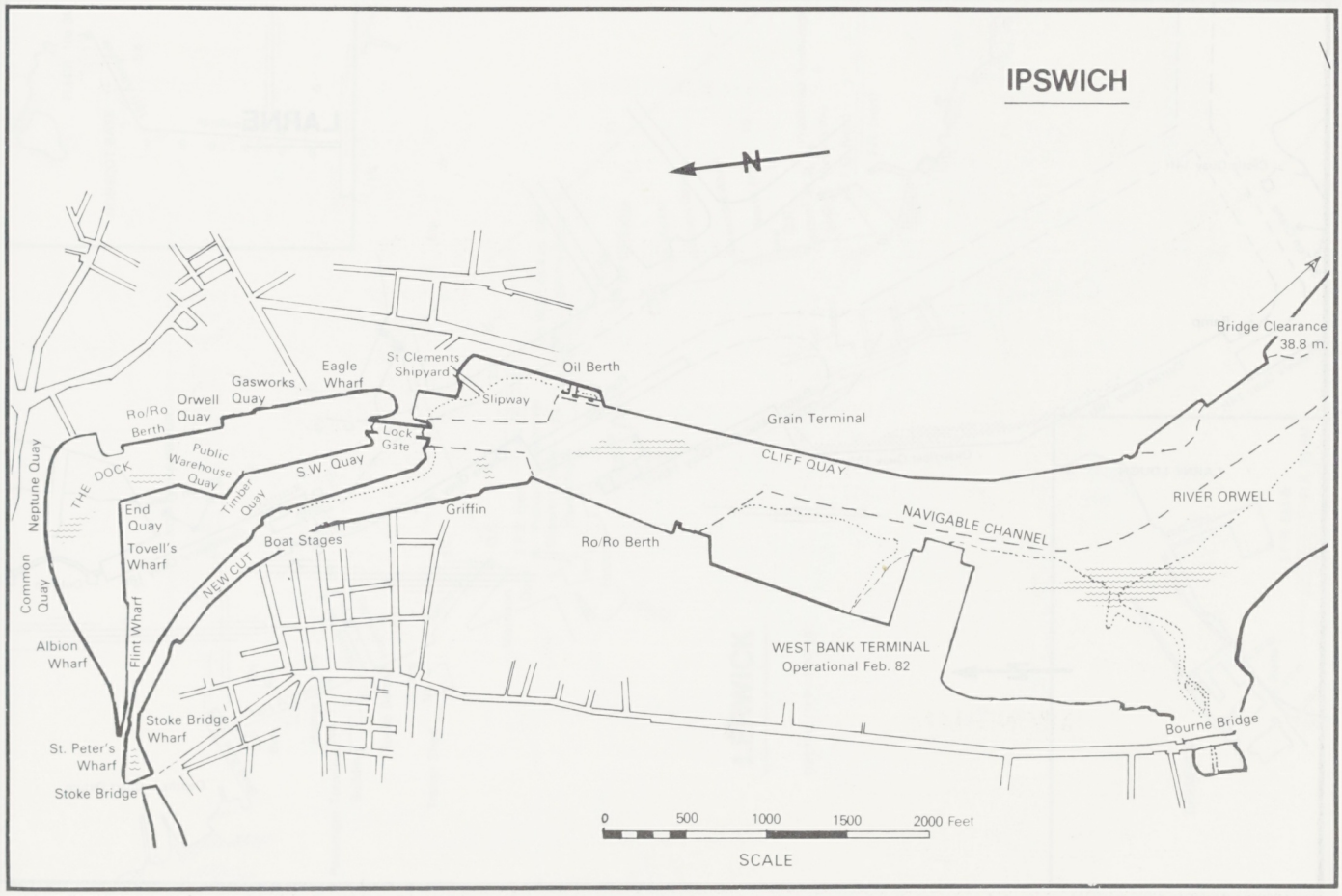


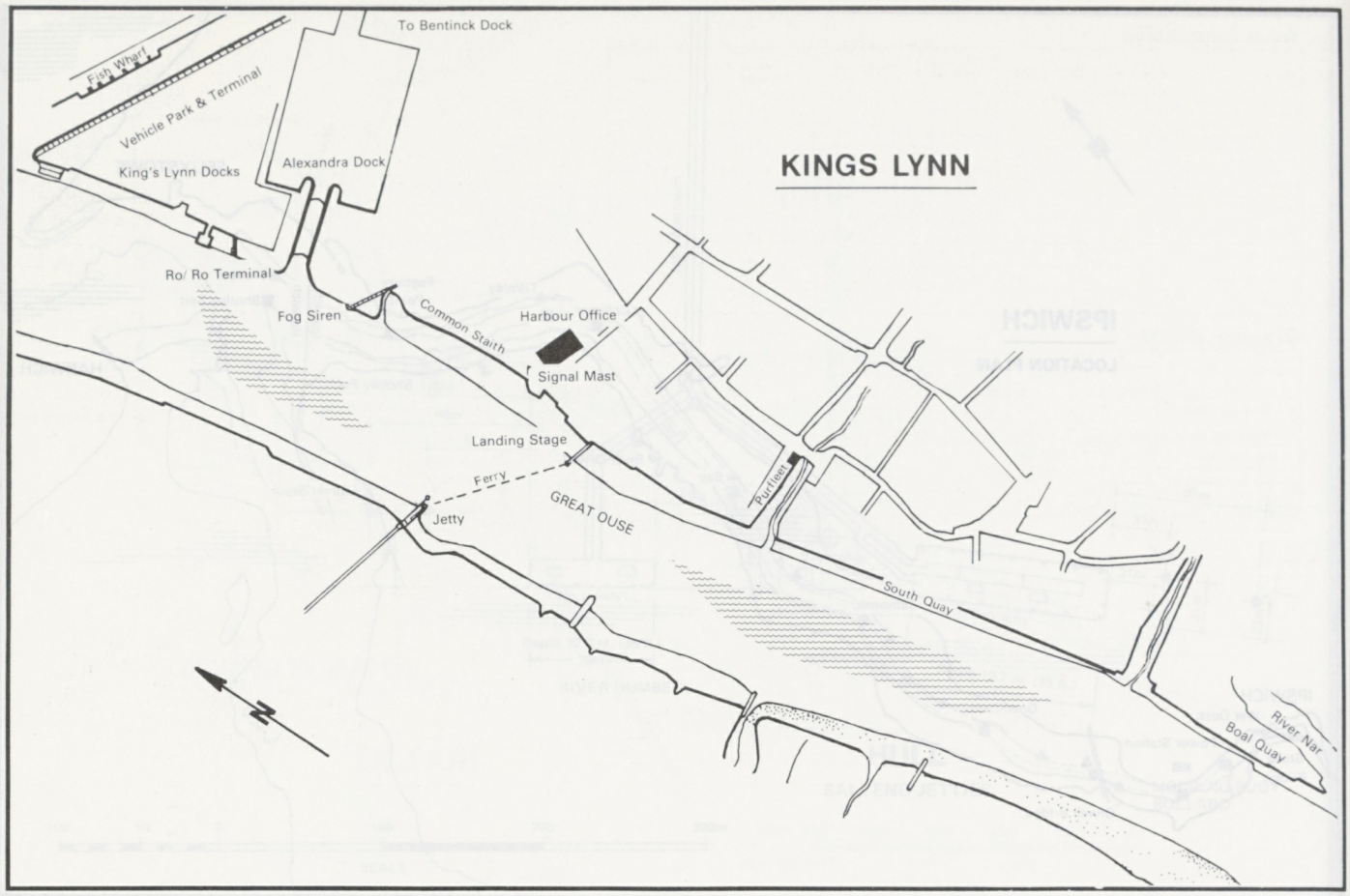
HULL (2)

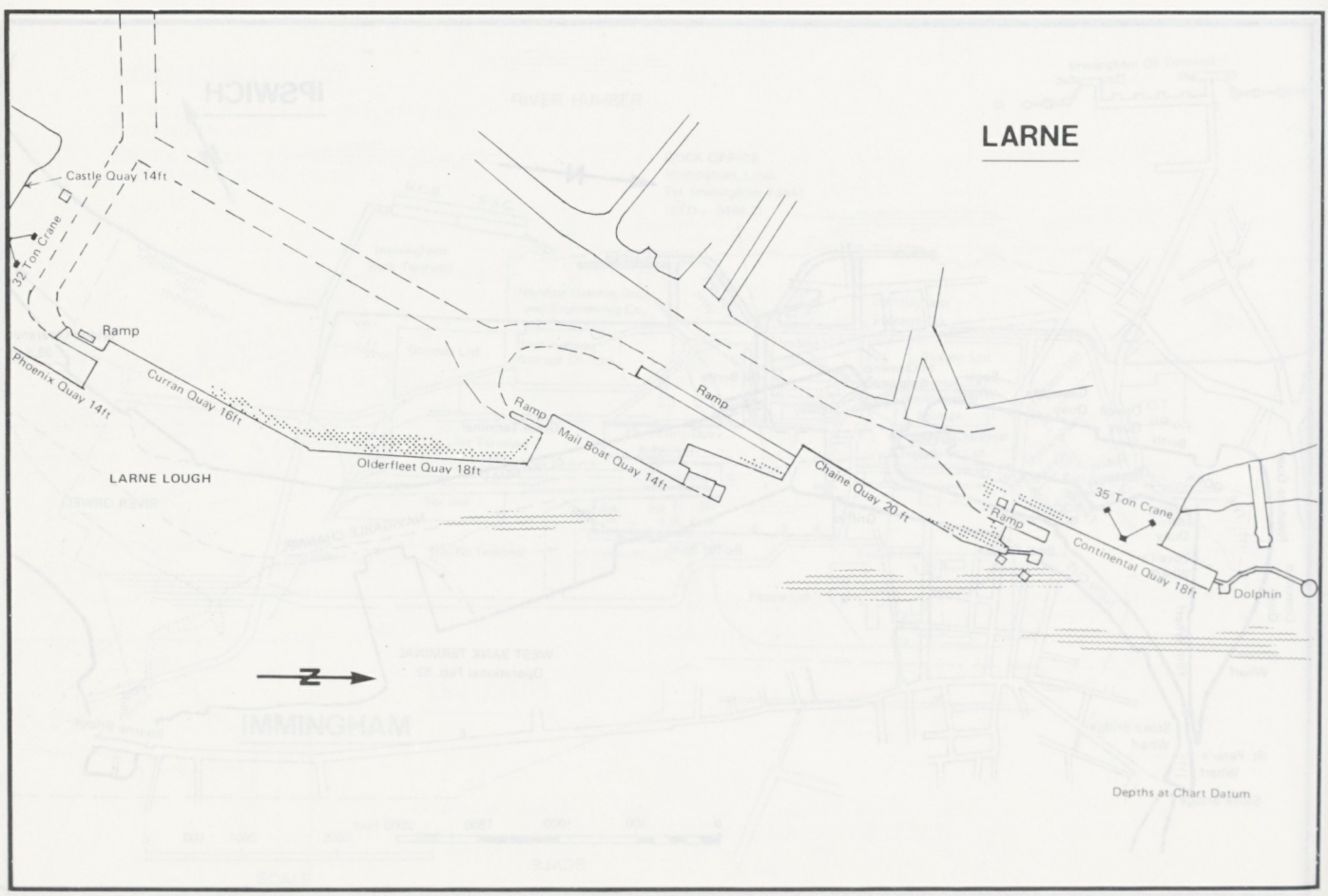

Jetty Approach
128m
98m
61m
46m
49m
Dolphin
46m
34m
Dolphin
95m
37m
31m
31m
23m
9m
No.1 Jetty
34m
50m
No.3 Jetty
Depth 10.7 m. (35 ft.)
79m
RIVER HUMBER
Depth 10.7 m. (35 ft.)
121m
HULL
SALTEND JETTIES
MOORING BUOY
BOLLARD
100 50 0 100 200 300m
SCALE

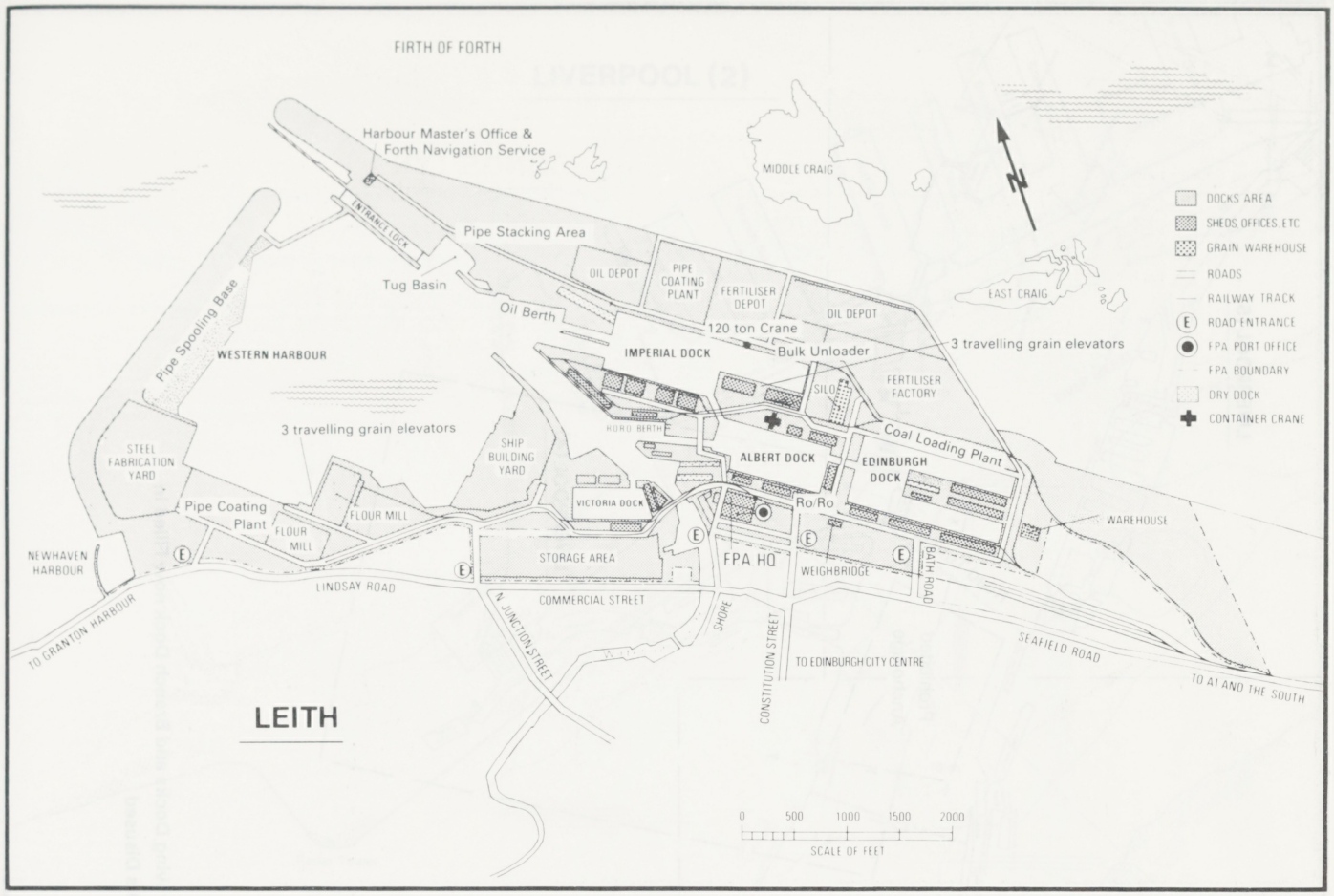

RIVER HUMBER
Immingham Oil Terminal
DOCK OFFICE
Immingham, Lincs.
Tel. Immingham 73441
(STD:– 0469-2)
N.C.B.
B.S.C.
Immingham Bulk Terminal
Humber Graving Dock and Engineering Co.
Western jetty
Eastern jetty
Immingham Storage Co.
Conoco Ltd.
Immingham Storage Co. Ltd.
Imatex Ltd.
Texaco Ltd.
Texaco Ltd.
I.O.T
Immingham Storage
Imperial Chemical Industries Ltd.
Immingham Storage
Tor Line Terminal
Outfitting Quay N.W. Arm
Lock
Tor line
9A 9B 9C S.W. Arm
6 5 4
Pan-American Sulphur Co. Ltd.
Eastern entrance
Western entrance
Ro/Ro Terminal
Fisons Ltd.
Fisons Ltd
IMMINGHAM
0 500 1000 2000 3000 Ft
SCALE

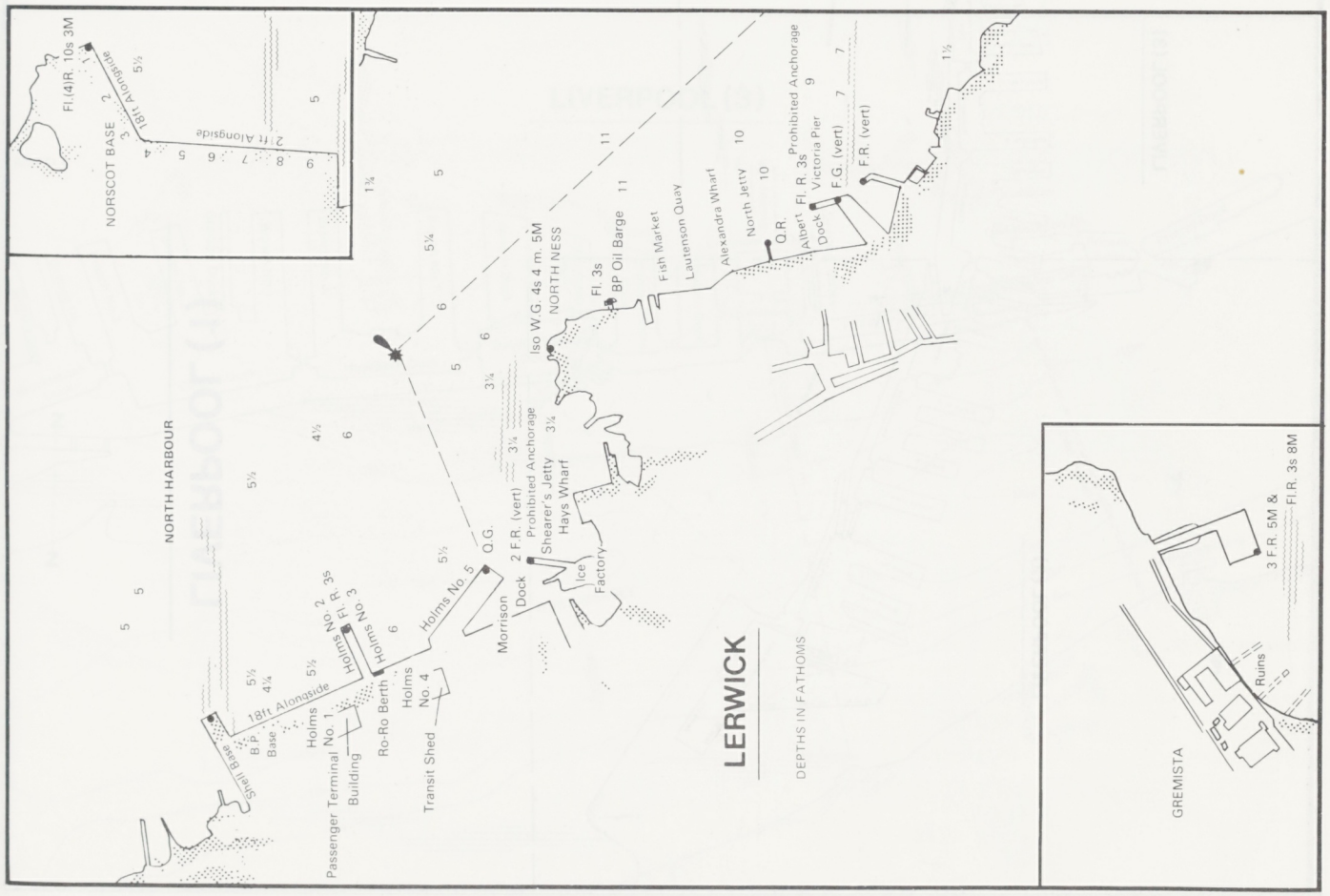

IPSWICH
LOCATION PLAN
FELIXSTOWE
Trimley
Fagbury Point
Walton
Shotley Spit
Collimer
Ipswich
Harwich
HARWICH
Shotley Point
River Orwell
Bay
River Stour
Cathouse
IPSWICH
Wet Dock
Power Station
Stoke Bridge
Downham
Orwell Bridge

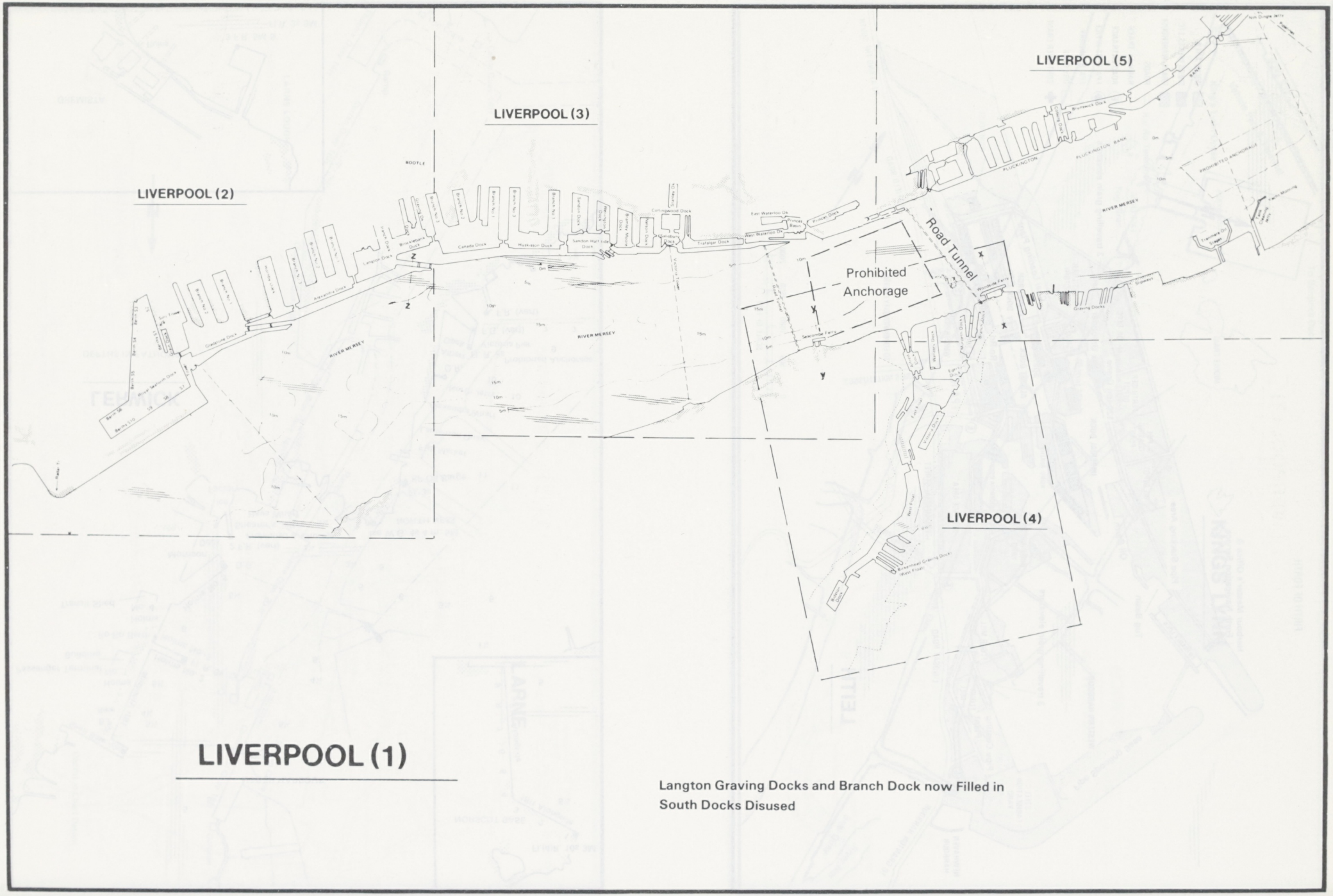

IPSWICH
N
Bridge Clearance 38.8 m.
St Clements Shipyard
Oil Berth
Eagle Wharf
Gasworks Quay
Slipway
Ro/Ro Berth
Orwell Quay
Grain Terminal
Lock Gate
Public Warehouse Quay
CLIFF QUAY
THE DOCK
S.W. Quay
Timber Quay
RIVER ORWELL
Neptune Quay
End Quay
Griffin
NAVIGABLE CHANNEL
Tovell's Wharf
Boat Stages
Ro/Ro Berth
Common Quay
NEW CUT
Albion Wharf
Flint Wharf
WEST BANK TERMINAL
Operational Feb. 82
Stoke Bridge Wharf
Bourne Bridge
St. Peter's Wharf
Stoke Bridge
0 500 1000 1500 2000 Feet
SCALE


KINGS LYNN
To Bentinck Dock
Fish Wharf
Vehicle Park & Terminal
King's Lynn Docks
Alexandra Dock
Ro/ Ro Terminal
Fog Siren
Common Staith
Harbour Office
Signal Mast
Landing Stage
Ferry
Jetty
GREAT OUSE
Purfleet
South Quay
River Nar
Boal Quay
N

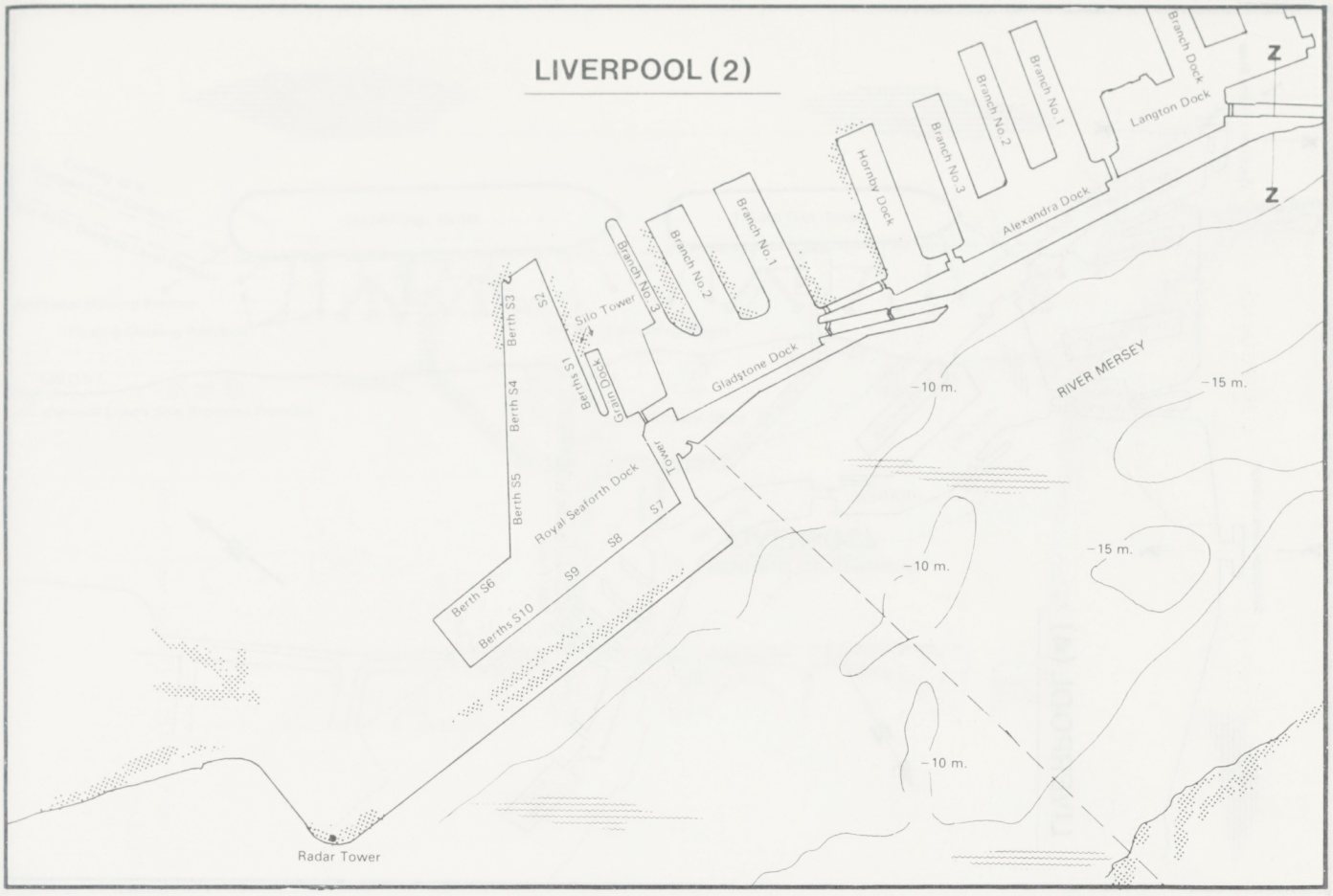

LARNE
Castle Quay 14ft
32 Ton Crane
Ramp
Phoenix Quay 14ft
Curran Quay 16ft
Olderfleet Quay 18ft
LARNE LOUGH
Ramp
Mail Boat Quay 14ft
Ramp
Chaine Quay 20 ft
Ramp
35 Ton Crane
Continental Quay 18ft
Dolphin
N
Depths at Chart Datum


FIRTH OF FORTH
Harbour Master's Office & Forth Navigation Service
MIDDLE CRAIG
EAST CRAIG
ENTRANCE LOCK
Pipe Stacking Area
Tug Basin
Oil Berth
OIL DEPOT
PIPE COATING PLANT
FERTILISER DEPOT
OIL DEPOT
120 ton Crane
Bulk Unloader
3 travelling grain elevators
IMPERIAL DOCK
Pipe Spooling Base
WESTERN HARBOUR
FERTILISER FACTORY
SILO
RORO BERTH
Coal Loading Plant
EDINBURGH DOCK
ALBERT DOCK
3 travelling grain elevators
STEEL FABRICATION YARD
SHIP BUILDING YARD
VICTORIA DOCK
Ro-Ro
Pipe Coating Plant
FLOUR MILL
FLOUR MILL
WAREHOUSE
NEWHAVEN HARBOUR
STORAGE AREA
FPA HQ
WEIGHBRIDGE
BATH ROAD
LINDSAY ROAD
COMMERCIAL STREET
N. JUNCTION STREET
SHORE
CONSTITUTION STREET
TO GRANTON HARBOUR
TO EDINBURGH CITY CENTRE
SEAFIELD ROAD
TO A1 AND THE SOUTH
DOCKS AREA
SHEDS OFFICES ETC
GRAIN WAREHOUSE
ROADS
RAILWAY TRACK
ROAD ENTRANCE
FPA PORT OFFICE
FPA BOUNDARY
DRY DOCK
CONTAINER CRANE
0 500 1000 1500 2000
SCALE OF FEET
LEITH

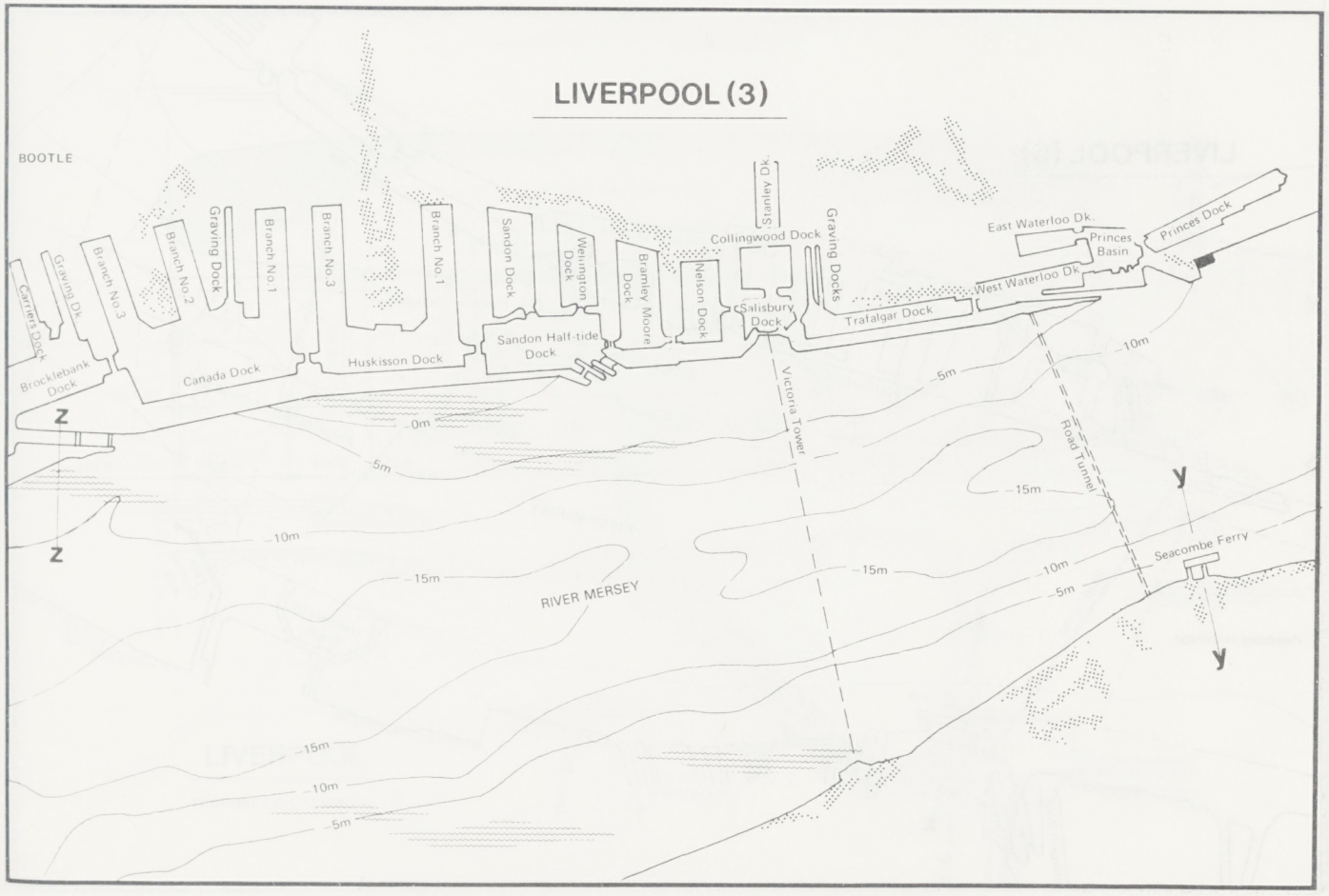

Fl.(4)R. 10s 3M
NORSCOT BASE
18ft Alongside
21ft Alongside
NORTH HARBOUR
Iso W.G. 4s 4 m. 5M
NORTH NESS
Fl. 3s
BP Oil Barge
Fish Market
Lautenson Quay
Alexandra Wharf
North Jetty
Q.R.
Albert Dock
Fl. R. 3s
Prohibited Anchorage
Victoria Pier
F.G. (vert)
F.R. (vert)
F.R. (vert)
Prohibited Anchorage
Shearer's Jetty
Hays Wharf
Ice Factory
Q.G.
Morrison Dock
Holms No. 5
Holms No. 2 Fl. R. 3s
Holms No. 3
Holms No. 4
Ro-Ro Berth
Transit Shed
Passenger Terminal Building
Holms No. 1
18ft Alongside
B.P. Base
Steel Base
LERWICK
DEPTHS IN FATHOMS
3 F.R. 5M &
Fl.R. 3s 8M
Ruins
GREMISTA

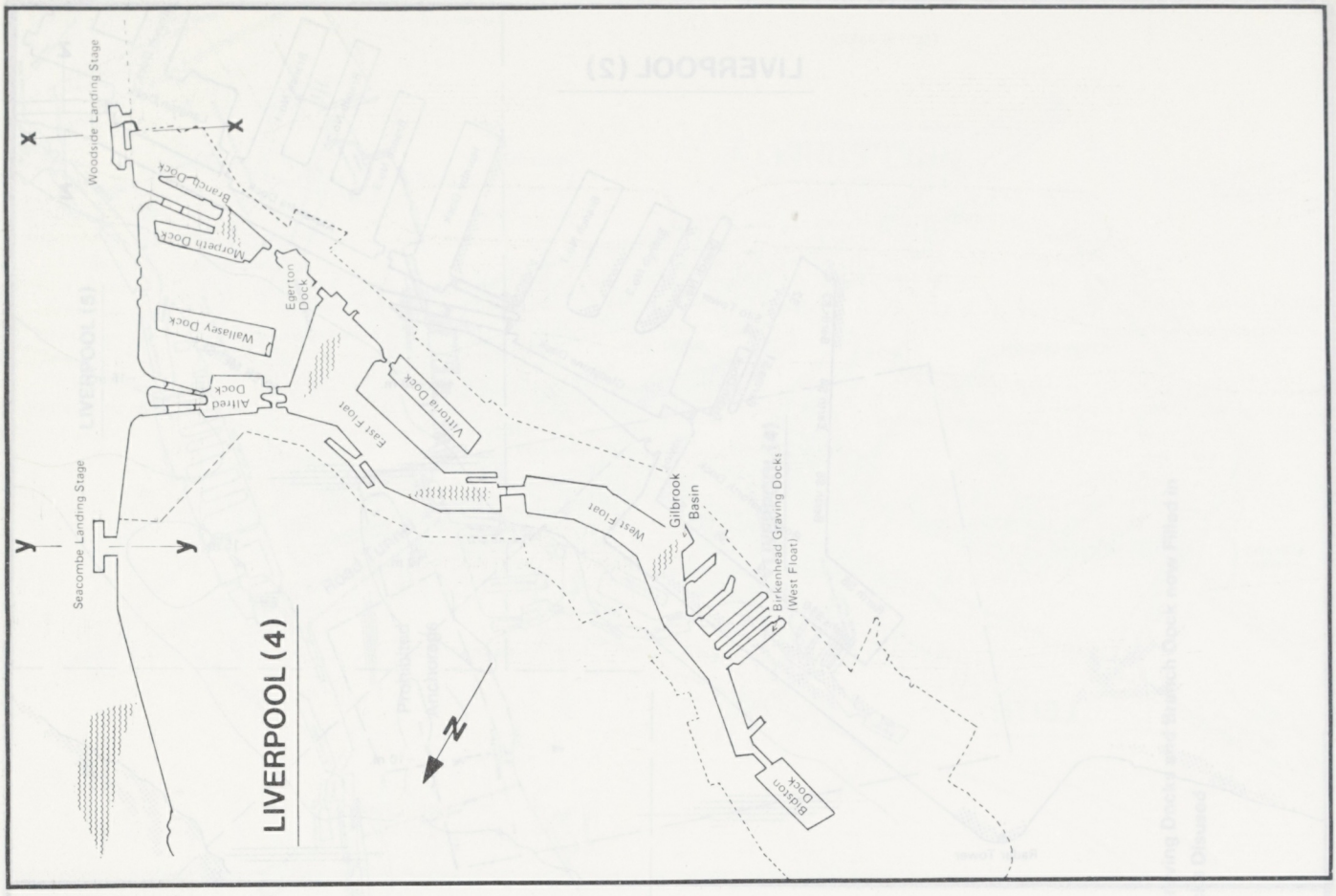

LIVERPOOL (2)
LIVERPOOL (3)
LIVERPOOL (5)
LIVERPOOL (4)
Prohibited Anchorage
Road Tunnel
RIVER MERSEY
BOOTLE
PLUCKINGTON
PLUCKINGTON BANK
PROHIBITED ANCHORAGE
Seacombe Ferry
Woodside Ferry
Canada Dock
Huskisson Dock
Sandon Dock
Wellington Dock
Brunswick Dock
Princes Dock
Princes Basin
Queens Dock
Trafalgar Dock
East Waterloo Dk
West Waterloo Dk
Collingwood Dock
Salisbury Dock
Alexandra Dock
Langton Dock
Gladstone Dock
Graving Docks
Wallasey Pier Head
Wallasey Ferry
Egerton Dock
Morpeth Dock
Vittoria Dock
Wellington Dock
Victoria Dock
Birkenhead Graving Docks
Birkenhead Ferry
Mersey Tunnel
Twin Mooring
Treatment Plant
Sewage Outfall
Pilot Jetty
Pilot Boat
Ferry Terminal
Ferry Berth
Ferry Berth
Ferry Berth

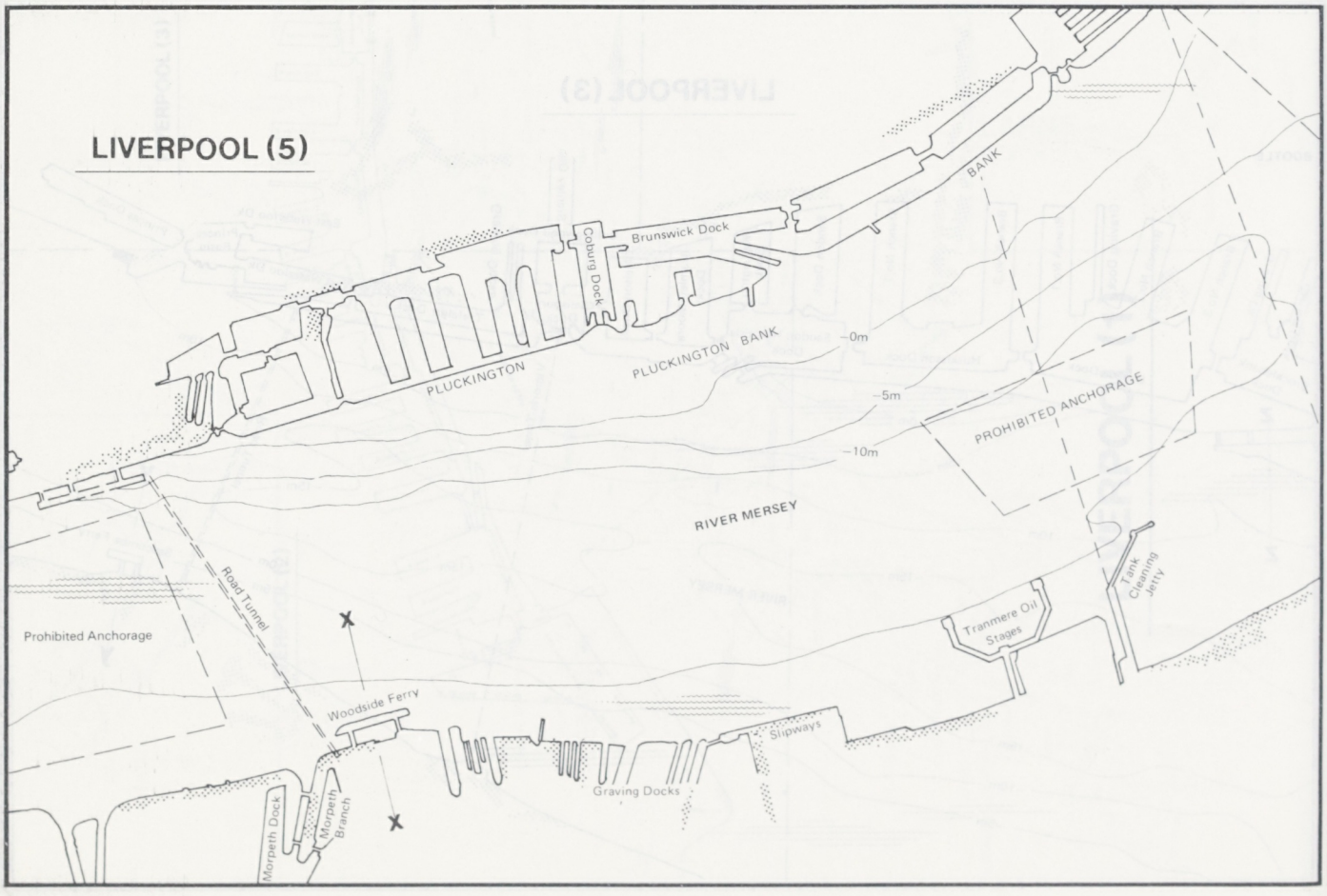
LIVERPOOL (2)

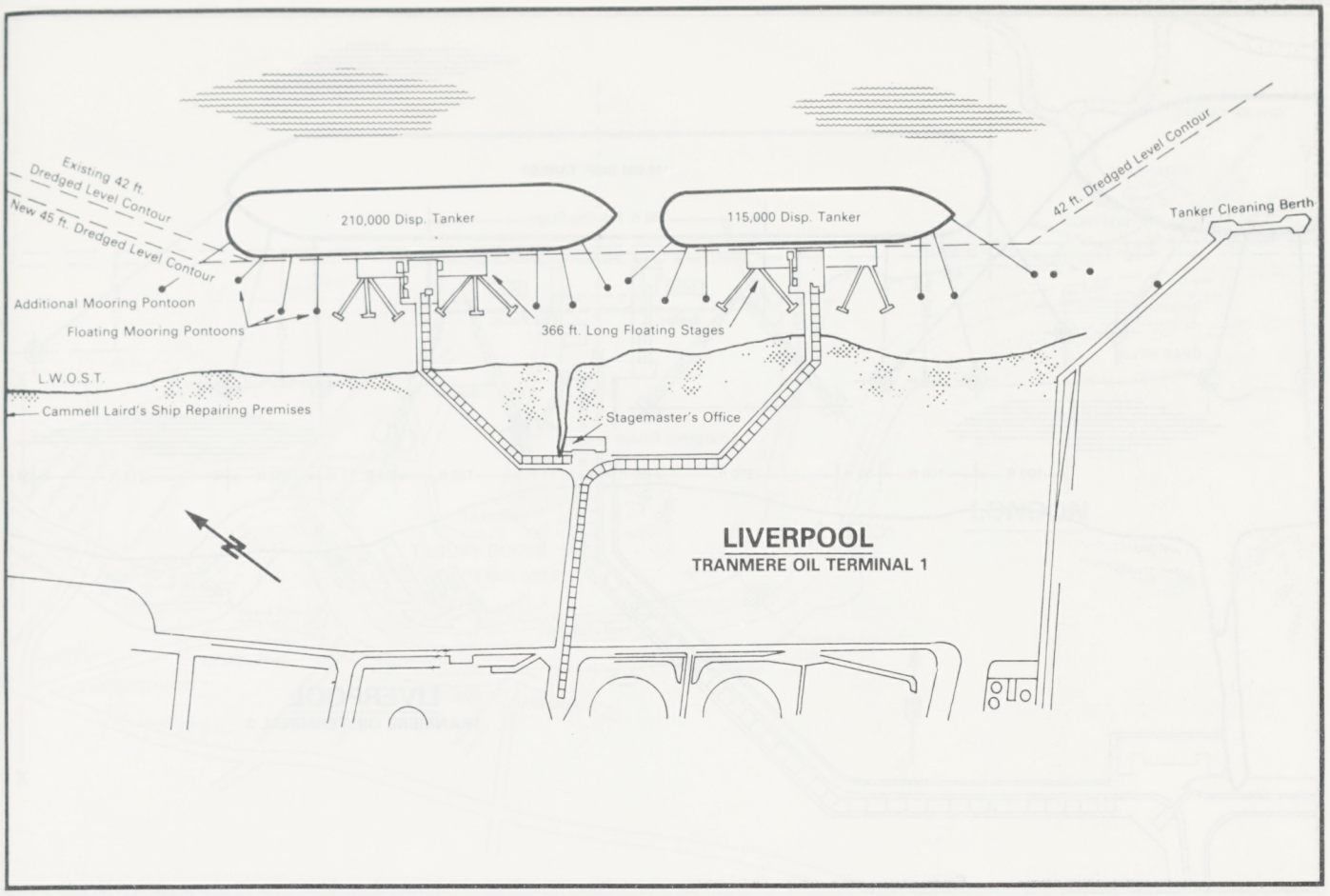


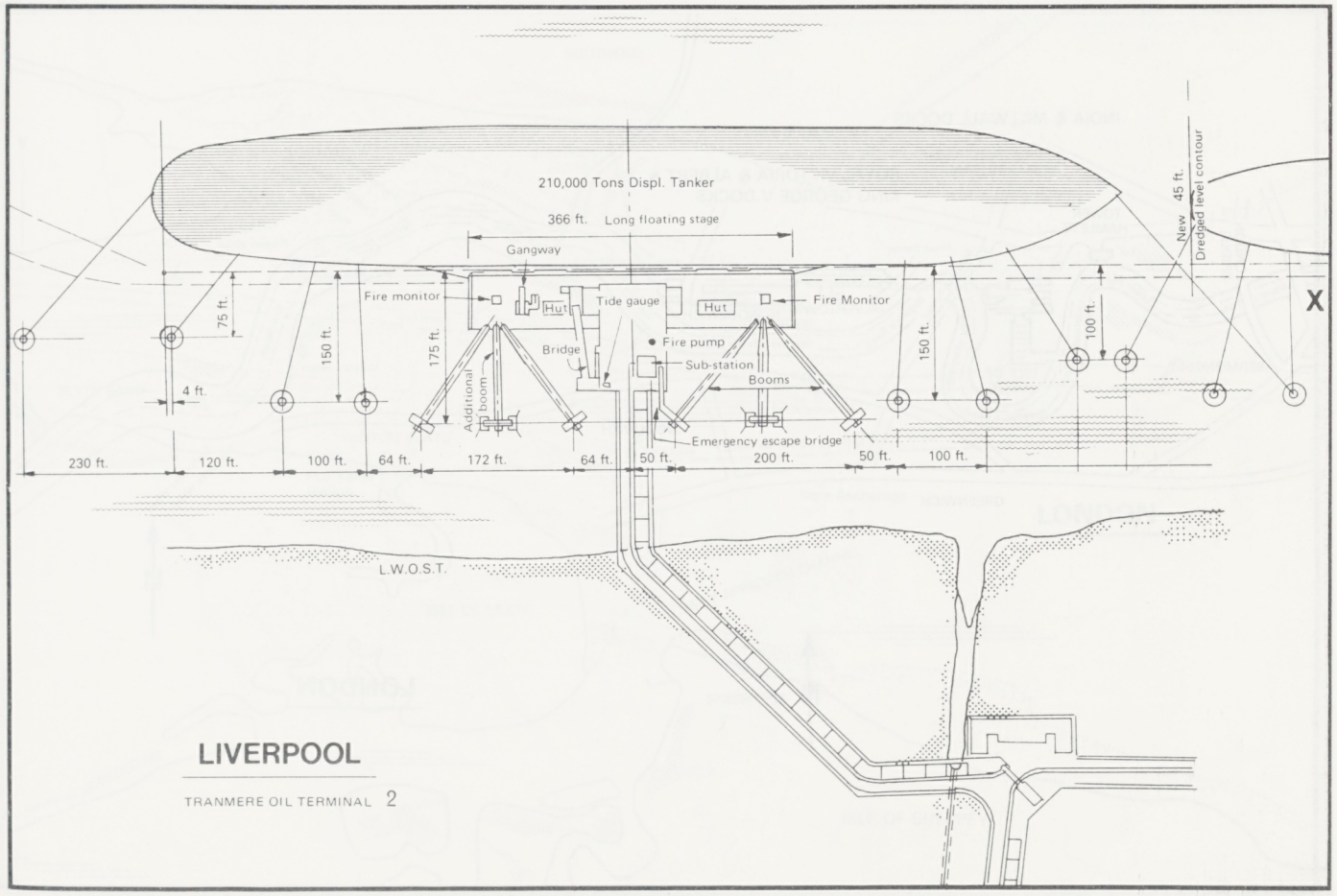
LIVERPOOL (3)

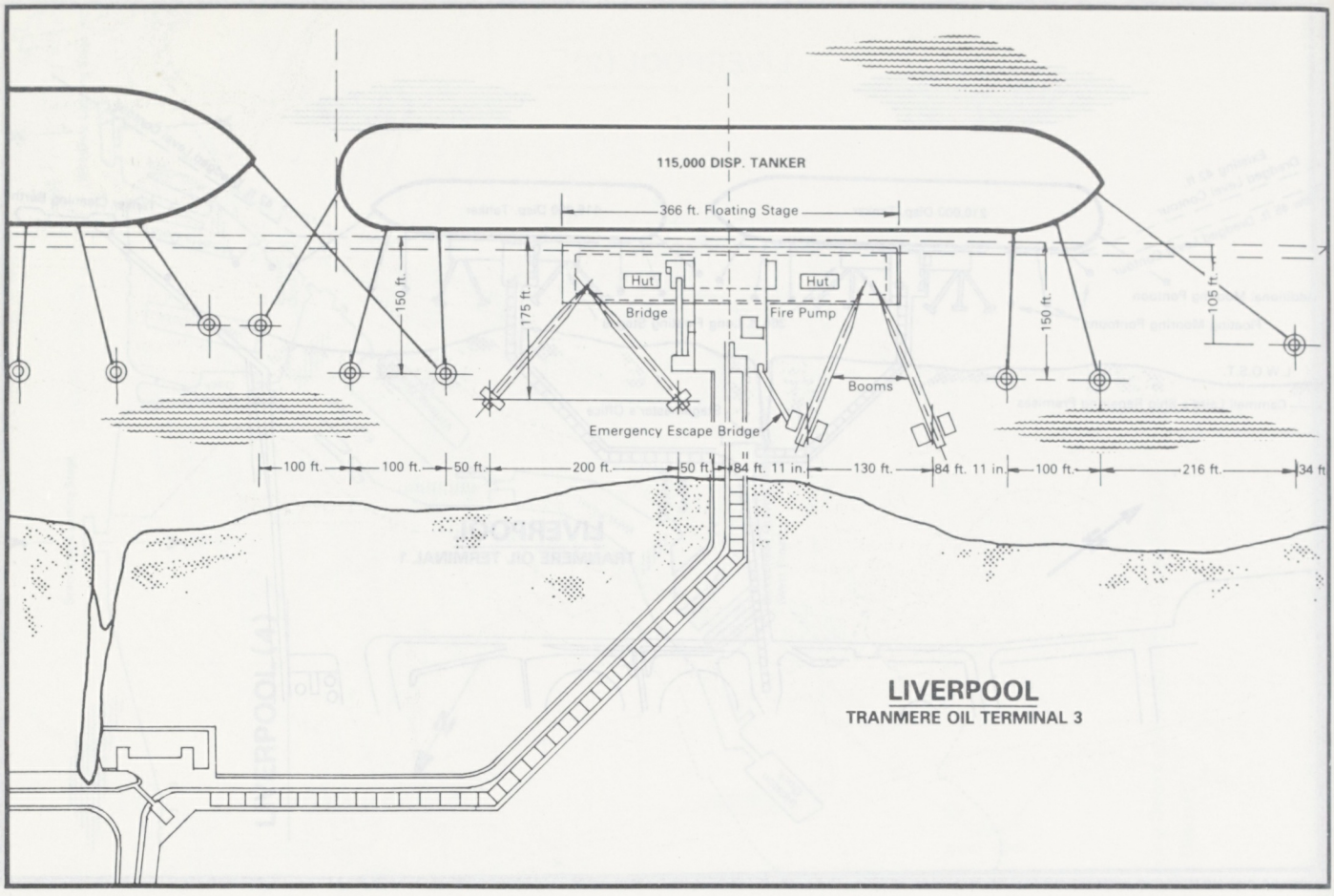



Woodside Landing Stage
Branch Dock
Morpeth Dock
Egerton Dock
Wallasey Dock
Alfred Dock
East Float
Victoria Dock
West Float
Gilbrook Basin
Birkenhead Graving Docks (West Float)
Seacombe Landing Stage
x
x
y
y
N
LIVERPOOL (4)

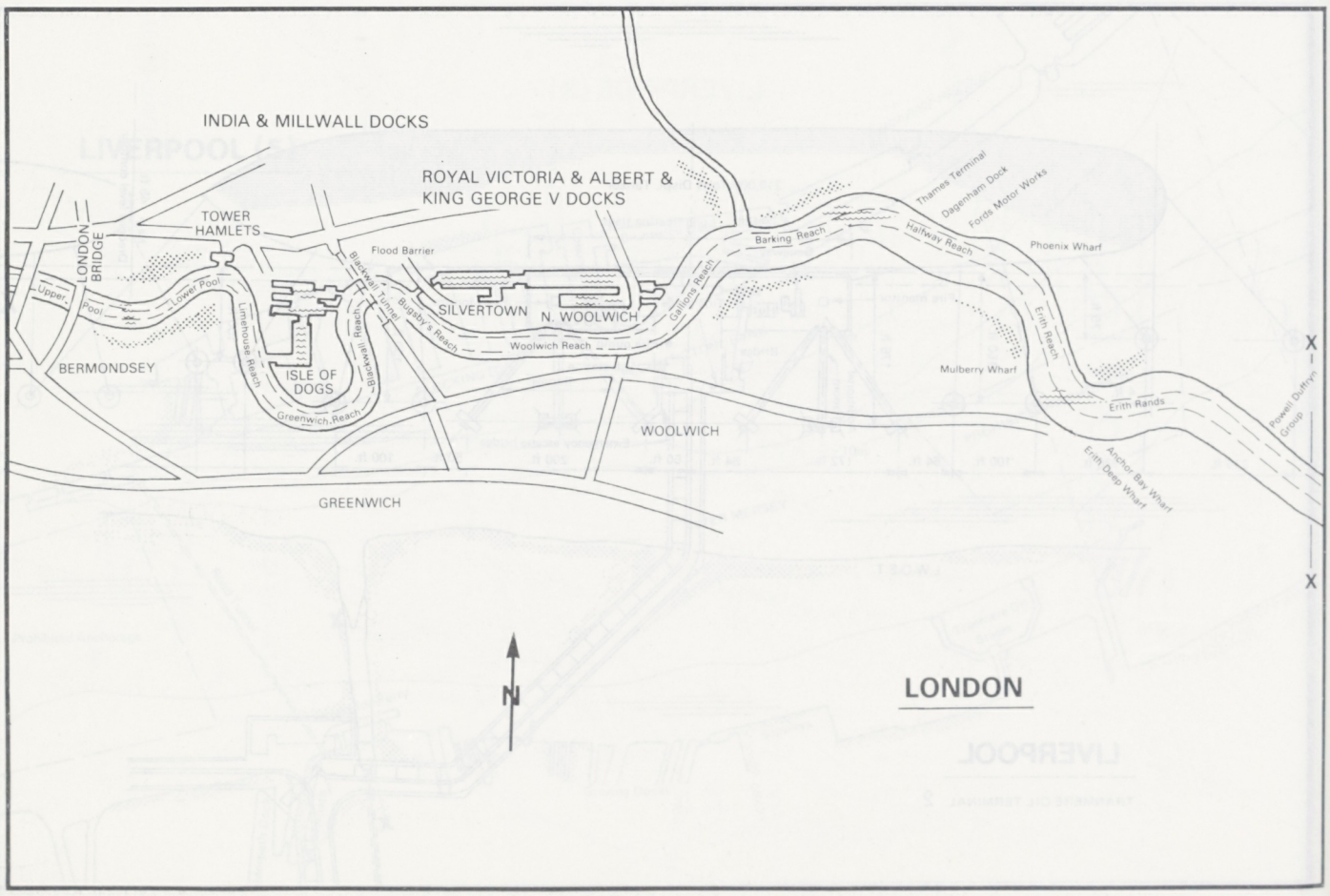

LIVERPOOL (5)
BANK
Brunswick Dock
Coburg Dock
PLUCKINGTON
PLUCKINGTON BANK
0m
5m
10m
PROHIBITED ANCHORAGE
RIVER MERSEY
Road Tunnel
Prohibited Anchorage
Woodside Ferry
Tranmere Oil Stages
Tank Cleaning Jetty
Slipways
Graving Docks
Morpeth Dock
Morpeth Branch
x
x


Existing 42 ft. Dredged Level Contour
New 45 ft. Dredged Level Contour
210,000 Disp. Tanker
115,000 Disp. Tanker
42 ft. Dredged Level Contour
Tanker Cleaning Berth
Additional Mooring Pontoon
Floating Mooring Pontoons
366 ft. Long Floating Stages
L.W.O.S.T.
Cammell Laird's Ship Repairing Premises
Stagemaster's Office
LIVERPOOL
TRANMERE OIL TERMINAL 1

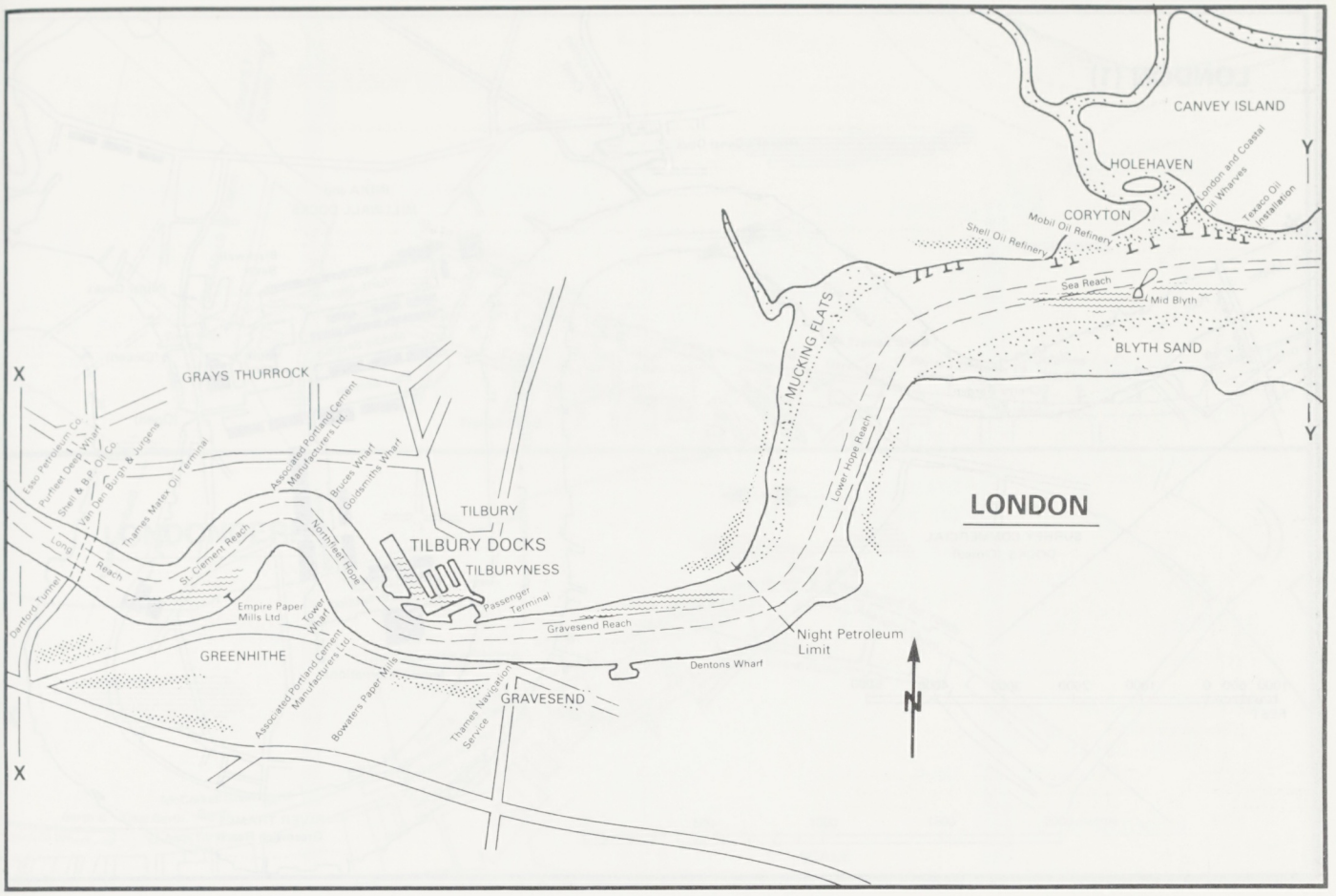

210,000 Tons Displ. Tanker
366 ft. Long floating stage
Gangway
New 45 ft. Dredged level contour
X
Fire monitor
Hut
Tide gauge
Hut
Fire Monitor
Bridge
Fire pump
Sub-station
Booms
Additional boom
Emergency escape bridge
75 ft.
150 ft.
175 ft.
150 ft.
100 ft.
4 ft.
230 ft.
120 ft.
100 ft.
64 ft.
172 ft.
64 ft.
50 ft.
200 ft.
50 ft.
100 ft.
L.W.O.S.T.
LIVERPOOL
TRANMERE OIL TERMINAL 2

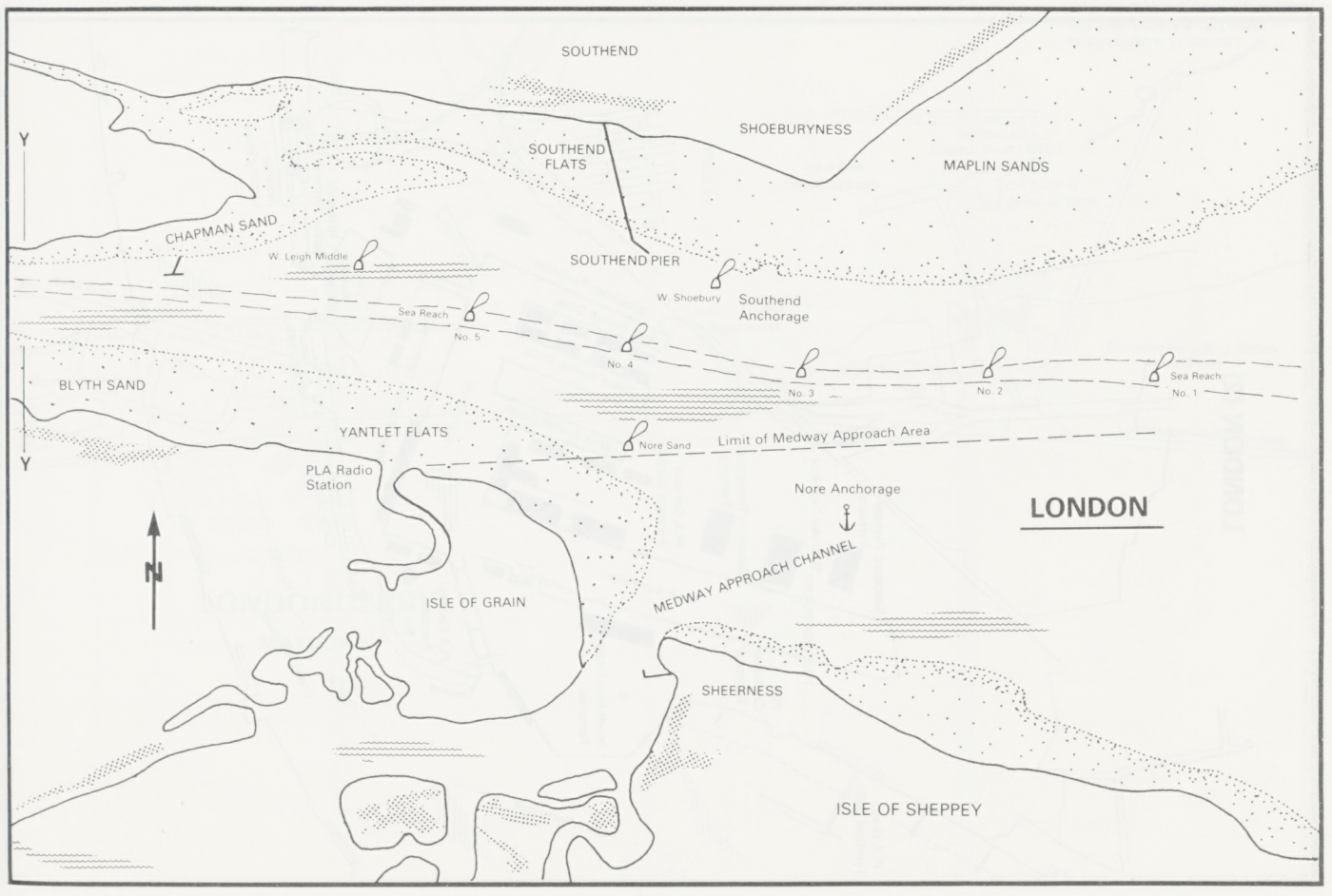


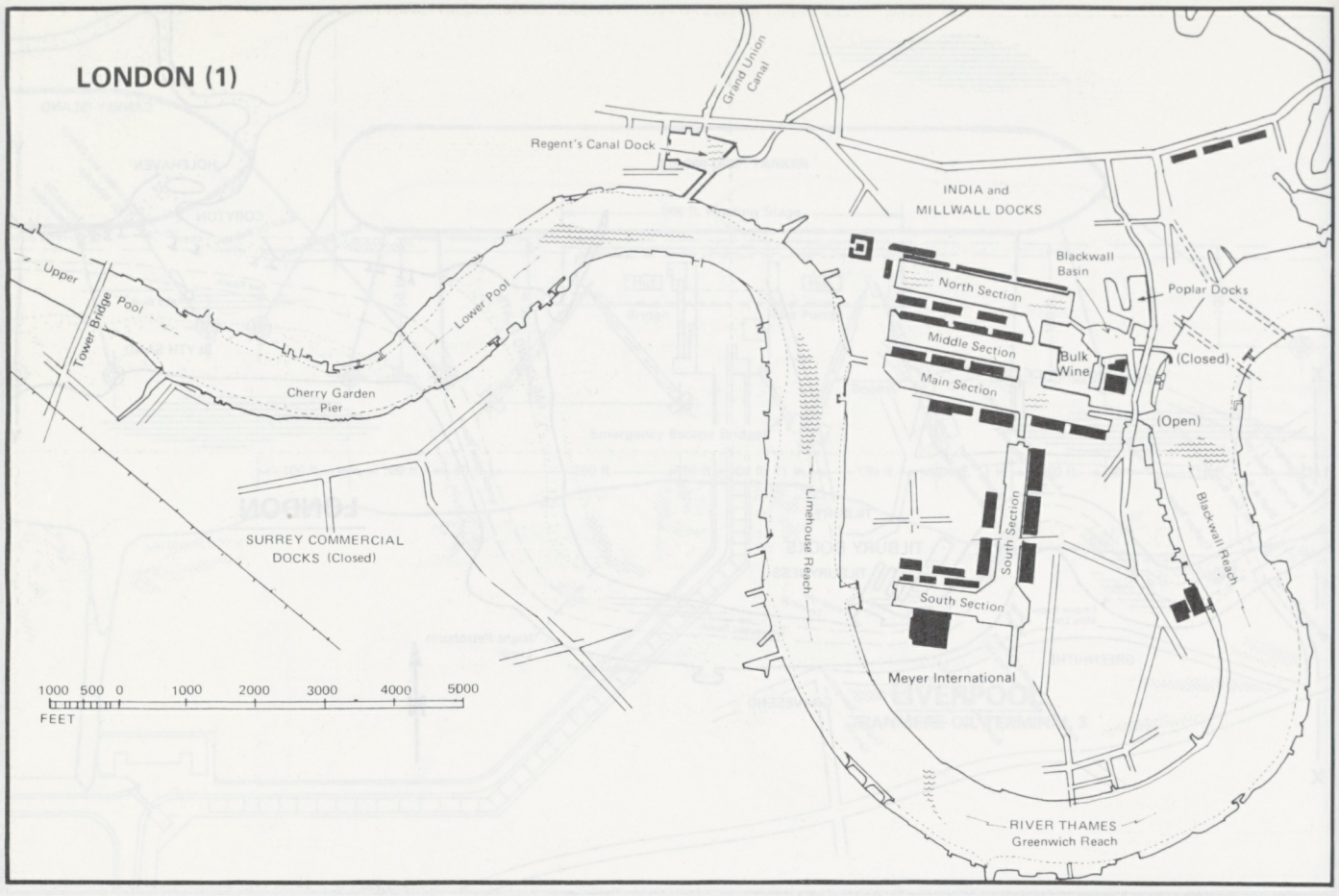
LIVERPOOL
TRANMERE OIL TERMINAL 3

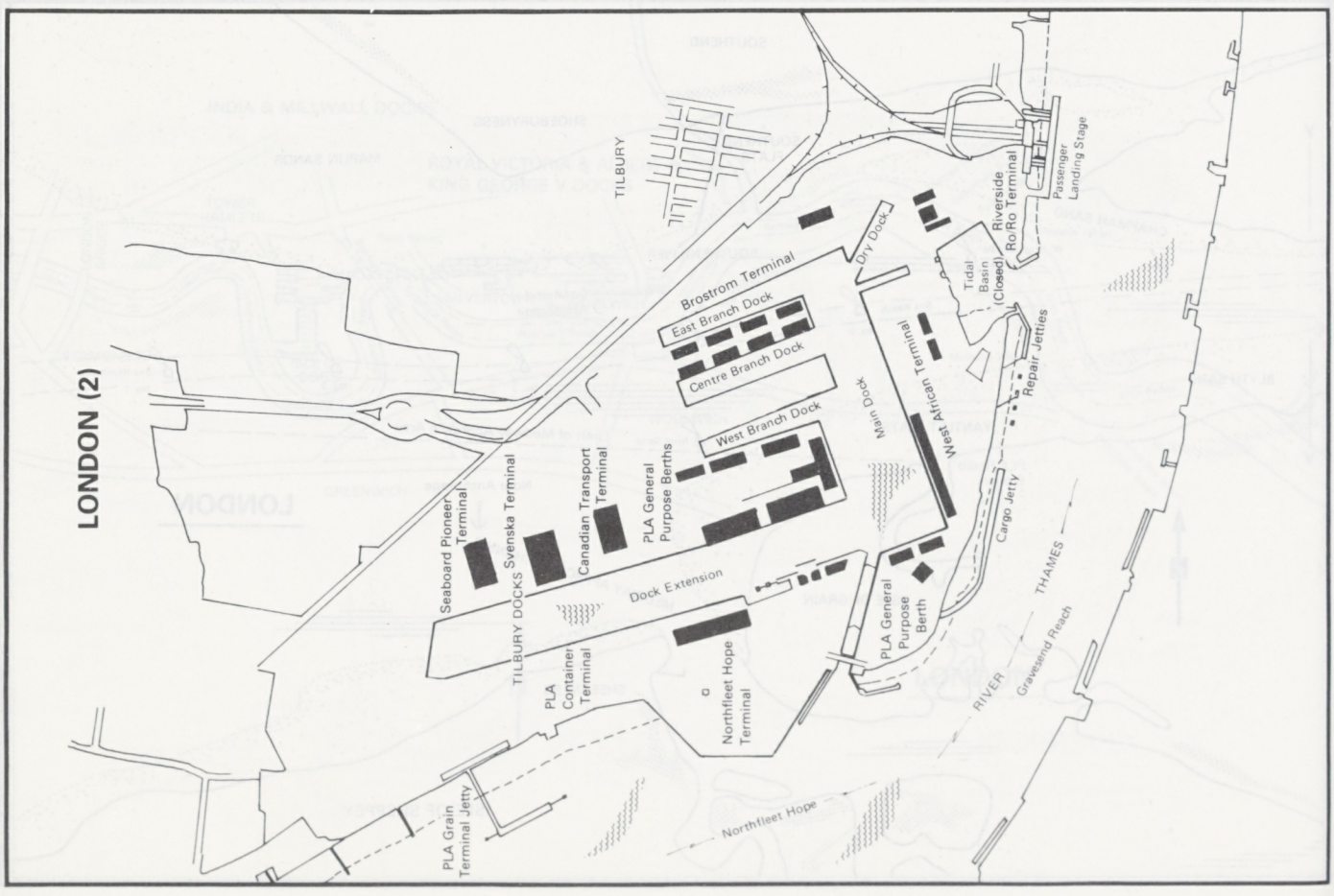


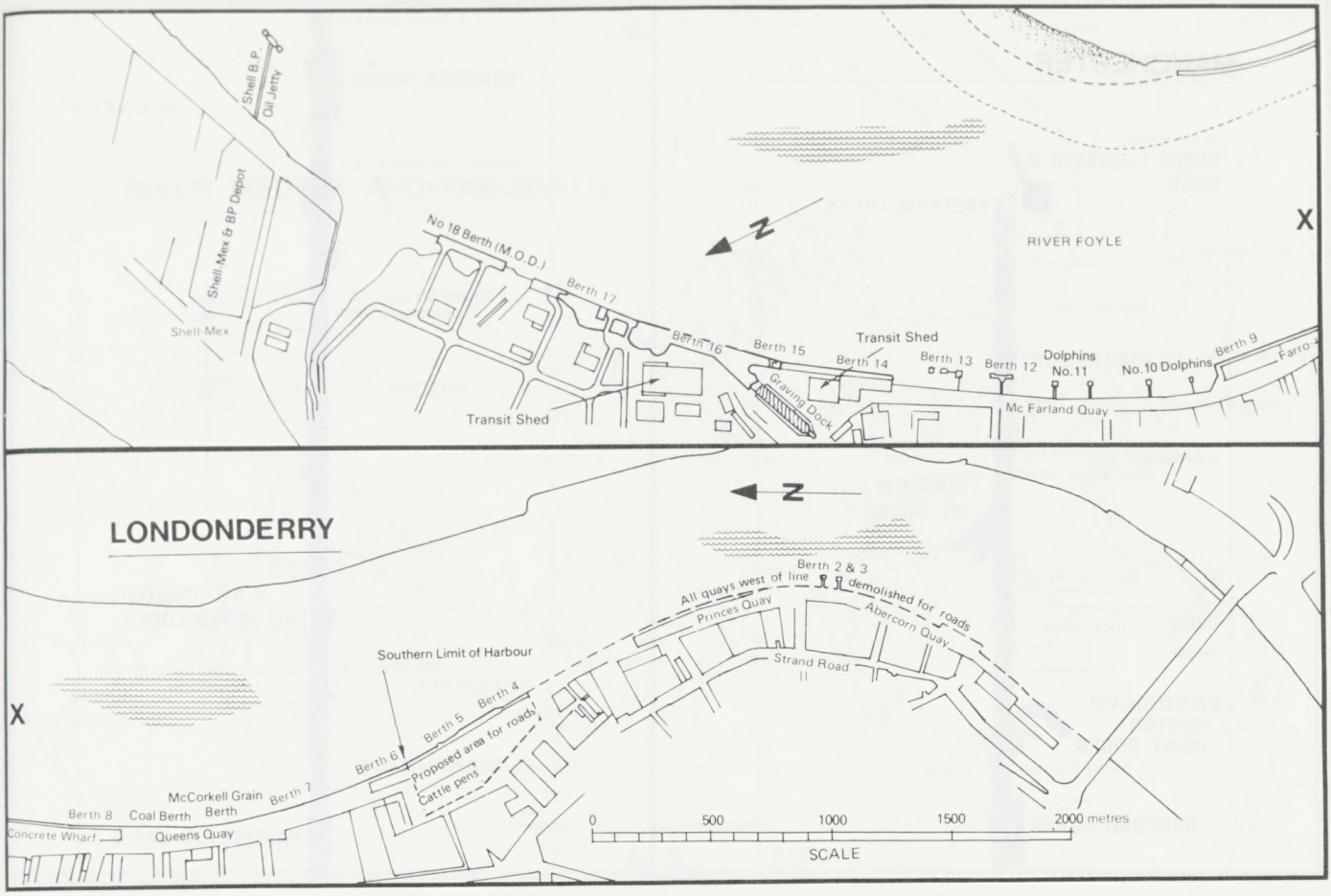
LONDON

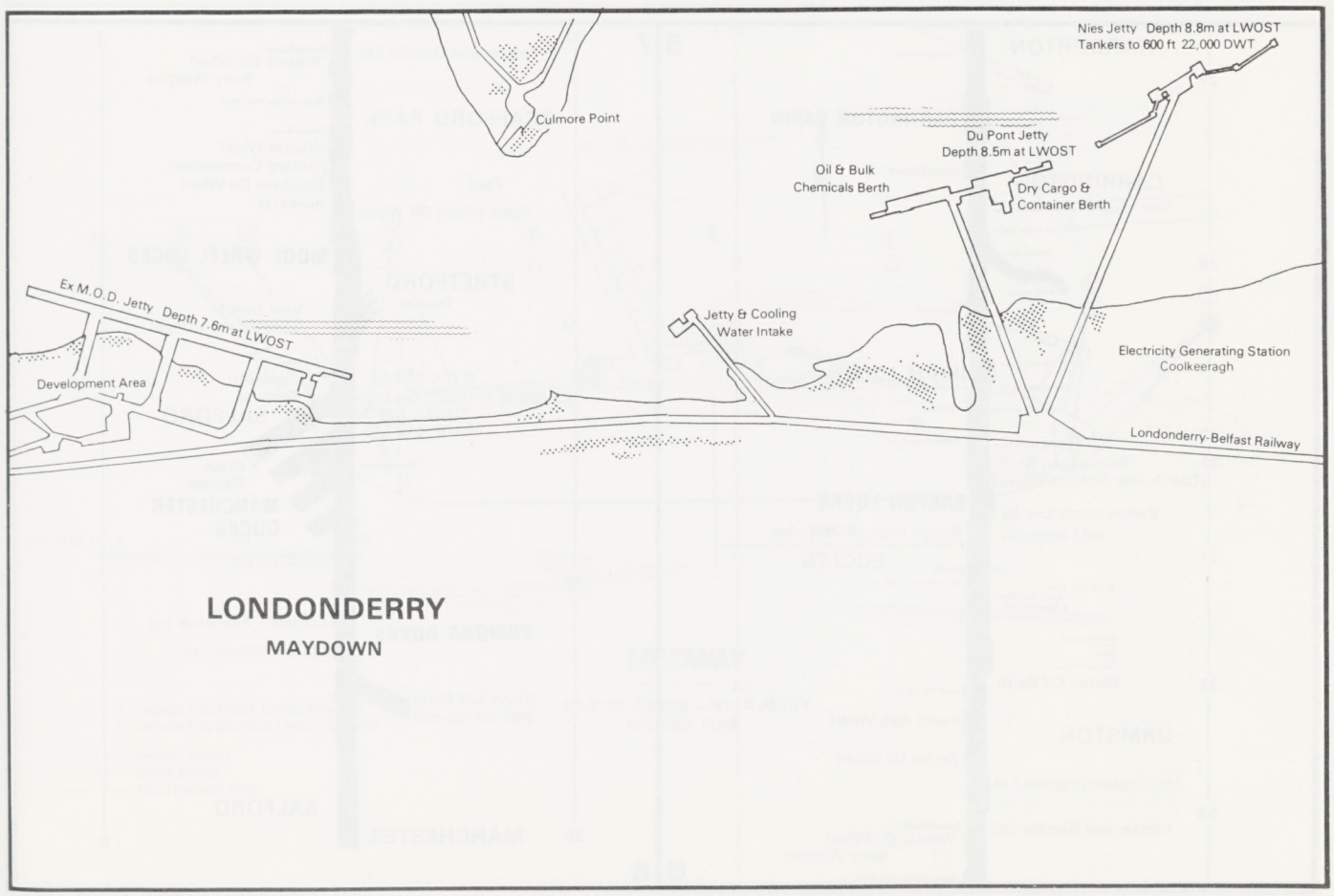

CANVEY ISLAND
HOLEHAVEN
CORYTON
Mobil Oil Refinery
Shell Oil Refinery
London and Coastal Oil Wharves
Texaco Oil Installation
Sea Reach
Mid Blyth
BLYTH SAND
MUCKING FLATS
Lower Hope Reach
LONDON
GRAYS THURROCK
Esso Petroleum Co.
Purfleet Deep Wharf
Shell & B.P. Oil Co.
Van den Burgh & Jurgens
Thames Matex Oil Terminal
Associated Portland Cement Manufacturers Ltd.
Bruces Wharf
Goldsmiths Wharf
TILBURY
TILBURY DOCKS
TILBURYNESS
Passenger Terminal
Northfleet Hope
St. Clement Reach
Long Reach
Dartford Tunnel
Empire Paper Mills Ltd.
Tower Wharf
GREENHITHE
Associated Portland Cement Manufacturers Ltd.
Bowaters Paper Mills
Thames Navigation Service
GRAVESEND
Gravesend Reach
Dentons Wharf
Night Petroleum Limit
X
Y
N


SOUTHEND
SHOEBURYNESS
SOUTHEND FLATS
MAPLIN SANDS
CHAPMAN SAND
W. Leigh Middle
SOUTHEND PIER
W. Shoebury
Southend Anchorage
Sea Reach
No. 5
No. 4
No. 3
No. 2
No. 1
BLYTH SAND
YANTLET FLATS
Nore Sand
Limit of Medway Approach Area
PLA Radio Station
Nore Anchorage
LONDON
MEDWAY APPROACH CHANNEL
ISLE OF GRAIN
SHEERNESS
ISLE OF SHEPPEY
Y
N


LONDON (1)
Grand Union Canal
Regent's Canal Dock
INDIA and MILLWALL DOCKS
Blackwall Basin
North Section
Middle Section
Main Section
Bulk Wine
Poplar Docks
(Closed)
(Open)
Upper Pool
Tower Bridge
Lower Pool
Cherry Garden Pier
SURREY COMMERCIAL DOCKS (Closed)
Limehouse Reach
South Section
South Section
Blackwall Reach
Meyer International
1000 500 0 1000 2000 3000 4000 5000
FEET
RIVER THAMES
Greenwich Reach

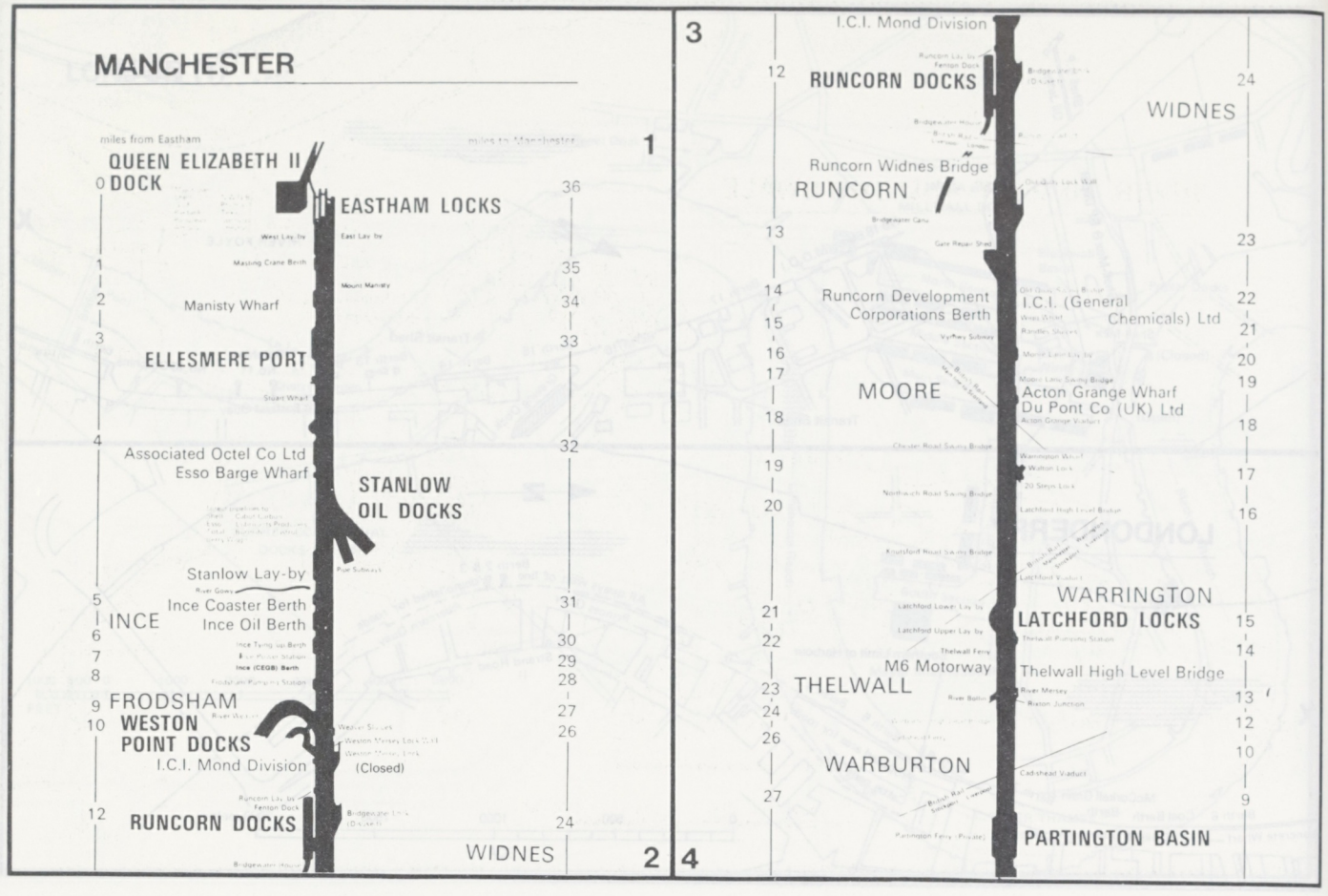

LONDON (2)
TILBURY
Riverside Ro/Ro Terminal
Passenger Landing Stage
Dry Dock
Tidal Basin (Closed)
Brostrom Terminal
East Branch Dock
Centre Branch Dock
West Branch Dock
Main Dock
West African Terminal
Repair Jetties
Seaboard Pioneer Terminal
Svenska Terminal
Canadian Transport Terminal
PLA General Purpose Berths
Cargo Jetty
TILBURY DOCKS
Dock Extension
PLA General Purpose Berth
THAMES
PLA Container Terminal
Northfleet Hope Terminal
RIVER
Gravesend Reach
PLA Grain Terminal Jetty
Northfleet Hope

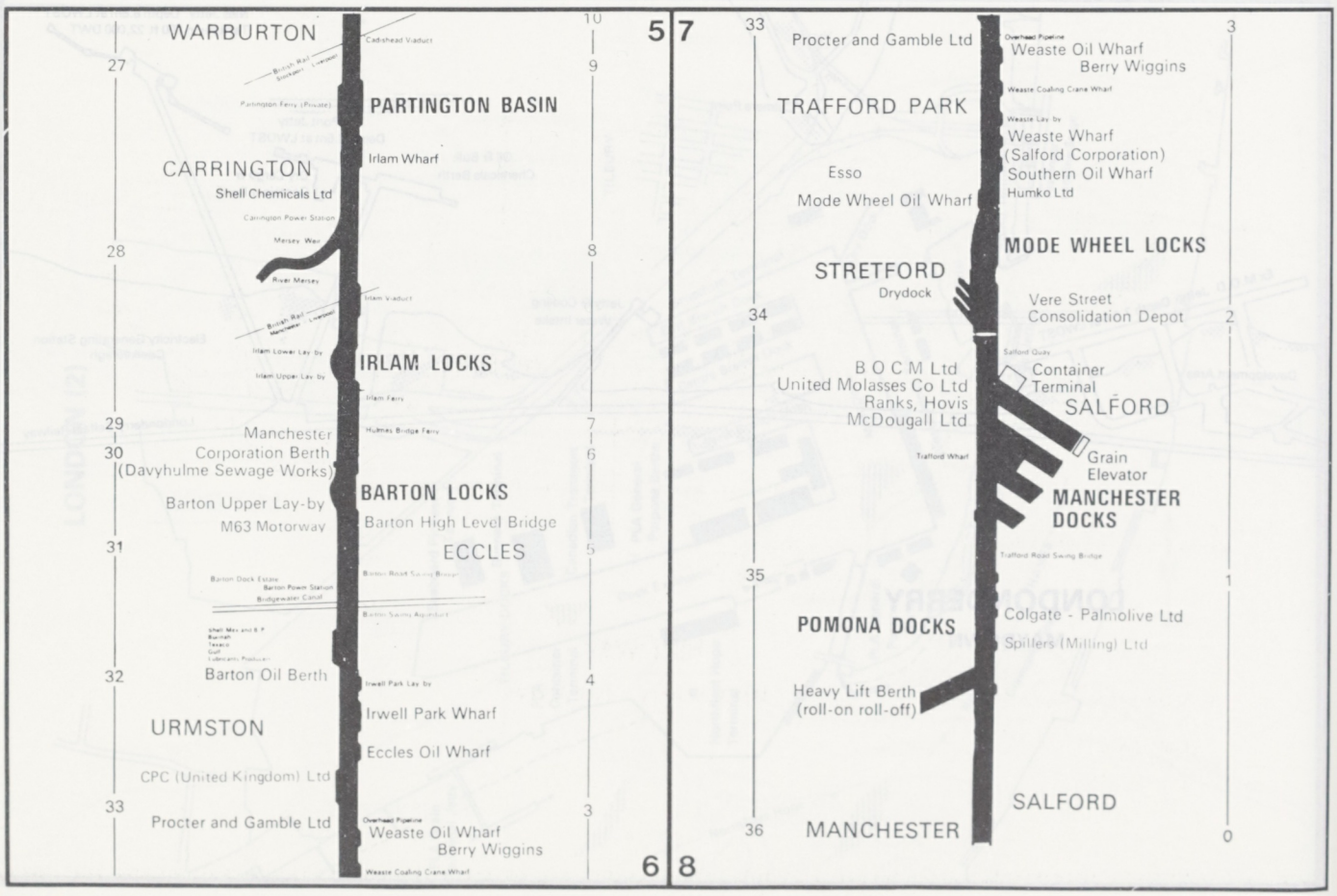


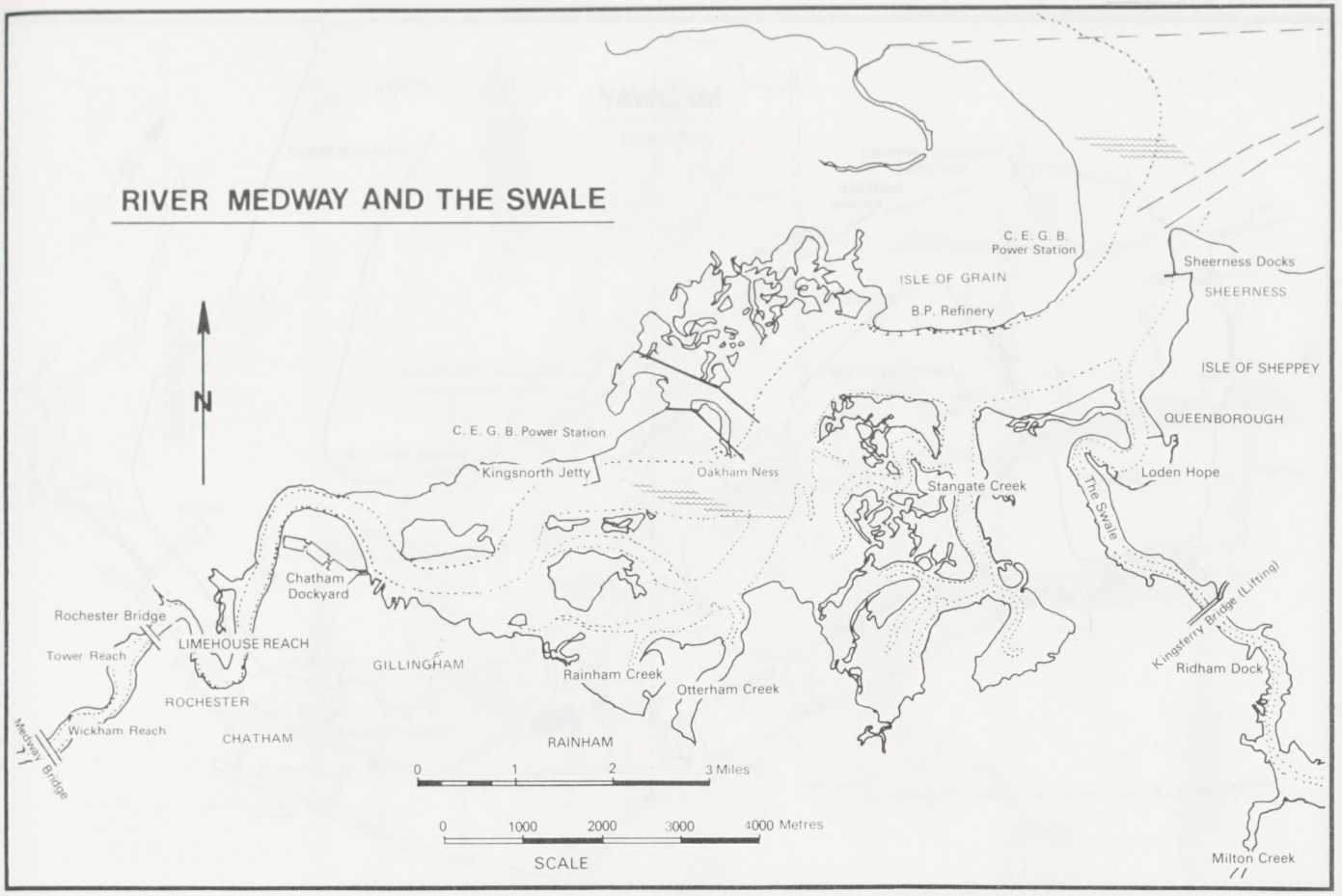


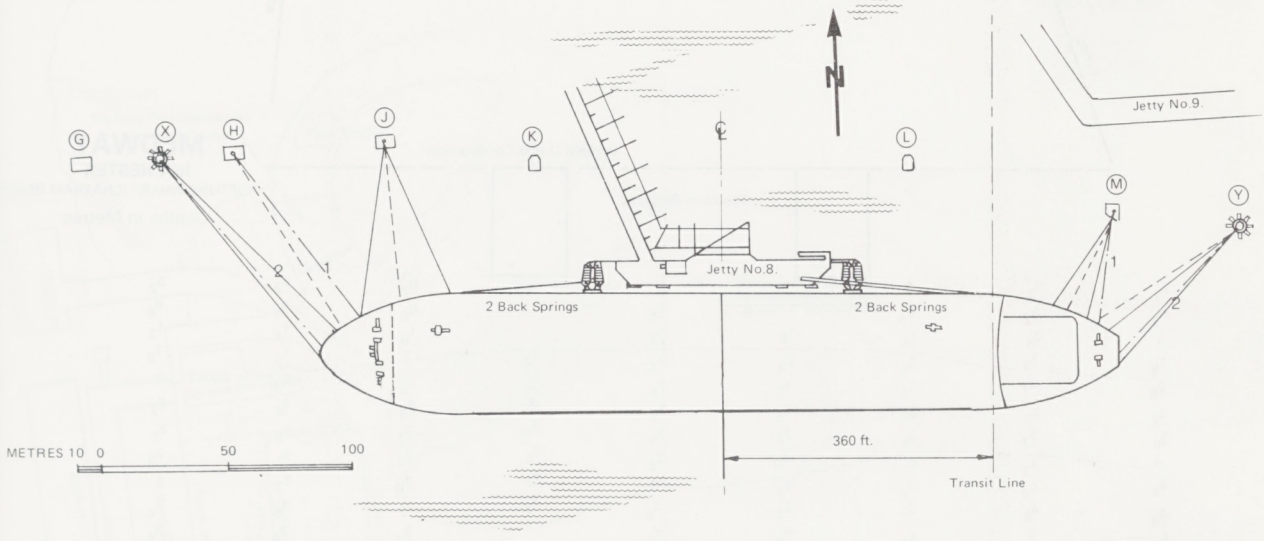
LONDONDERRY

MAYDOWN


MANCHESTER
miles from Eastham
QUEEN ELIZABETH II DOCK
EASTHAM LOCKS
Manisty Wharf
ELLESMERE PORT
Associated Octel Co Ltd
Esso Barge Wharf
STANLOW OIL DOCKS
Stanlow Lay-by
Ince Coaster Berth
INCE
Ince Oil Berth
FRODSHAM
WESTON POINT DOCKS
I.C.I. Mond Division
(Closed)
RUNCORN DOCKS
WIDNES
1
2
3
4
I.C.I. Mond Division
RUNCORN DOCKS
WIDNES
Runcorn Widnes Bridge
RUNCORN
Runcorn Development Corporations Berth
I.C.I. (General Chemicals) Ltd
MOORE
Acton Grange Wharf
Du Pont Co (UK) Ltd
WARRINGTON
LATCHFORD LOCKS
M6 Motorway
Thelwall High Level Bridge
THELWALL
WARBURTON
PARTINGTON BASIN


WARBURTON
PARTINGTON BASIN
CARRINGTON
Shell Chemicals Ltd
Irlam Wharf
IRLAM LOCKS
Manchester Corporation Berth
(Davyhulme Sewage Works)
Barton Upper Lay-by
M63 Motorway
BARTON LOCKS
Barton High Level Bridge
ECCLES
Barton Oil Berth
URMSTON
Irwell Park Wharf
Eccles Oil Wharf
CPC (United Kingdom) Ltd
Procter and Gamble Ltd
Weaste Oil Wharf
Berry Wiggins
5
6
7
8
Procter and Gamble Ltd
Weaste Oil Wharf
Berry Wiggins
TRAFFORD PARK
Weaste Wharf
(Salford Corporation)
Southern Oil Wharf
Esso
Mode Wheel Oil Wharf
Humko Ltd
MODE WHEEL LOCKS
STRETFORD
Drydock
Vere Street
Consolidation Depot
B O C M Ltd
United Molasses Co Ltd
Ranks, Hovis
McDougall Ltd
Container Terminal
SALFORD
Grain Elevator
MANCHESTER DOCKS
POMONA DOCKS
Colgate - Palmolive Ltd
Spillers (Milling) Ltd
Heavy Lift Berth
(roll-on roll-off)
SALFORD
MANCHESTER



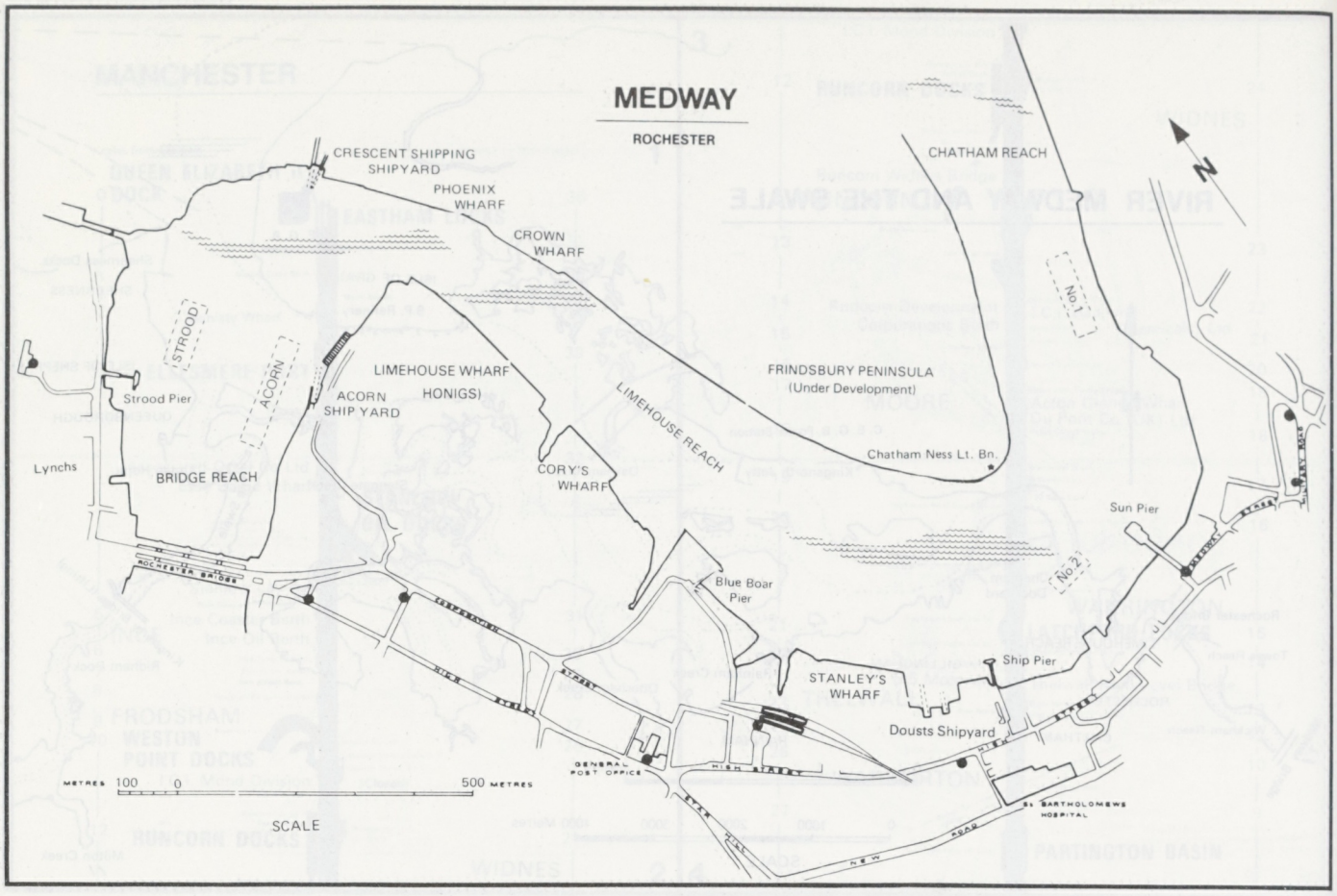


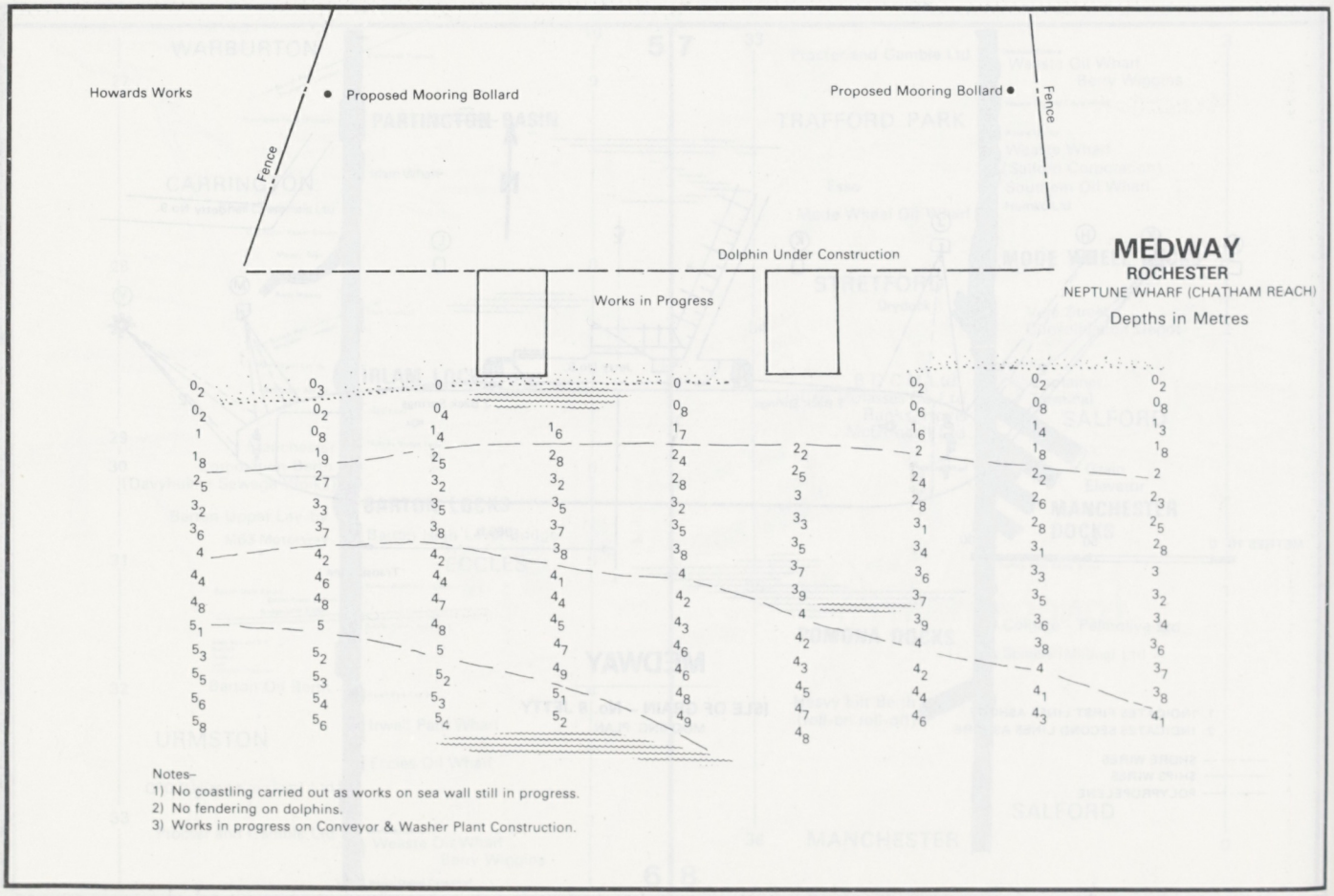
MEDWAY

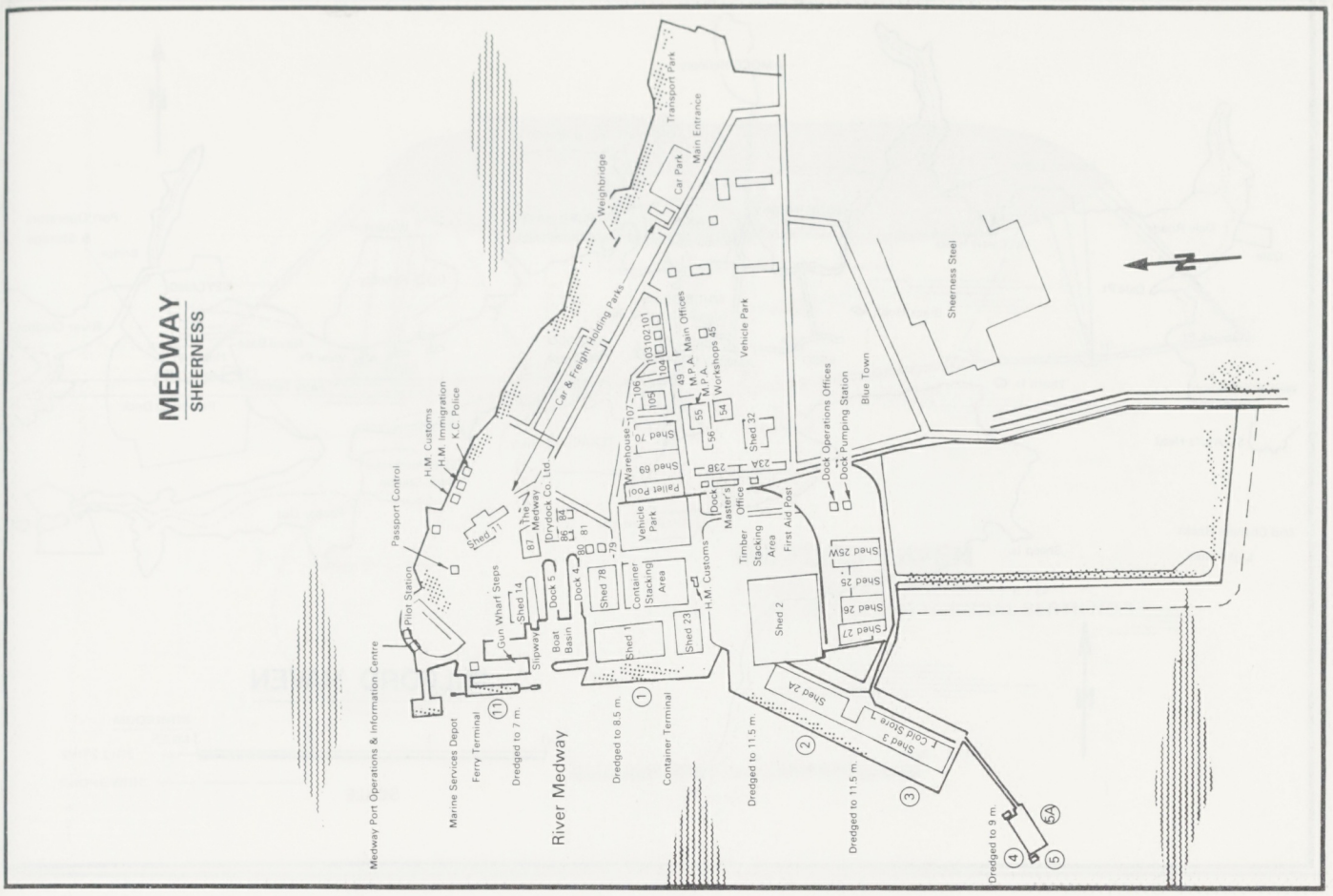
ISLE OF GRAIN – No. 8 JETTY
MOORING PLAN

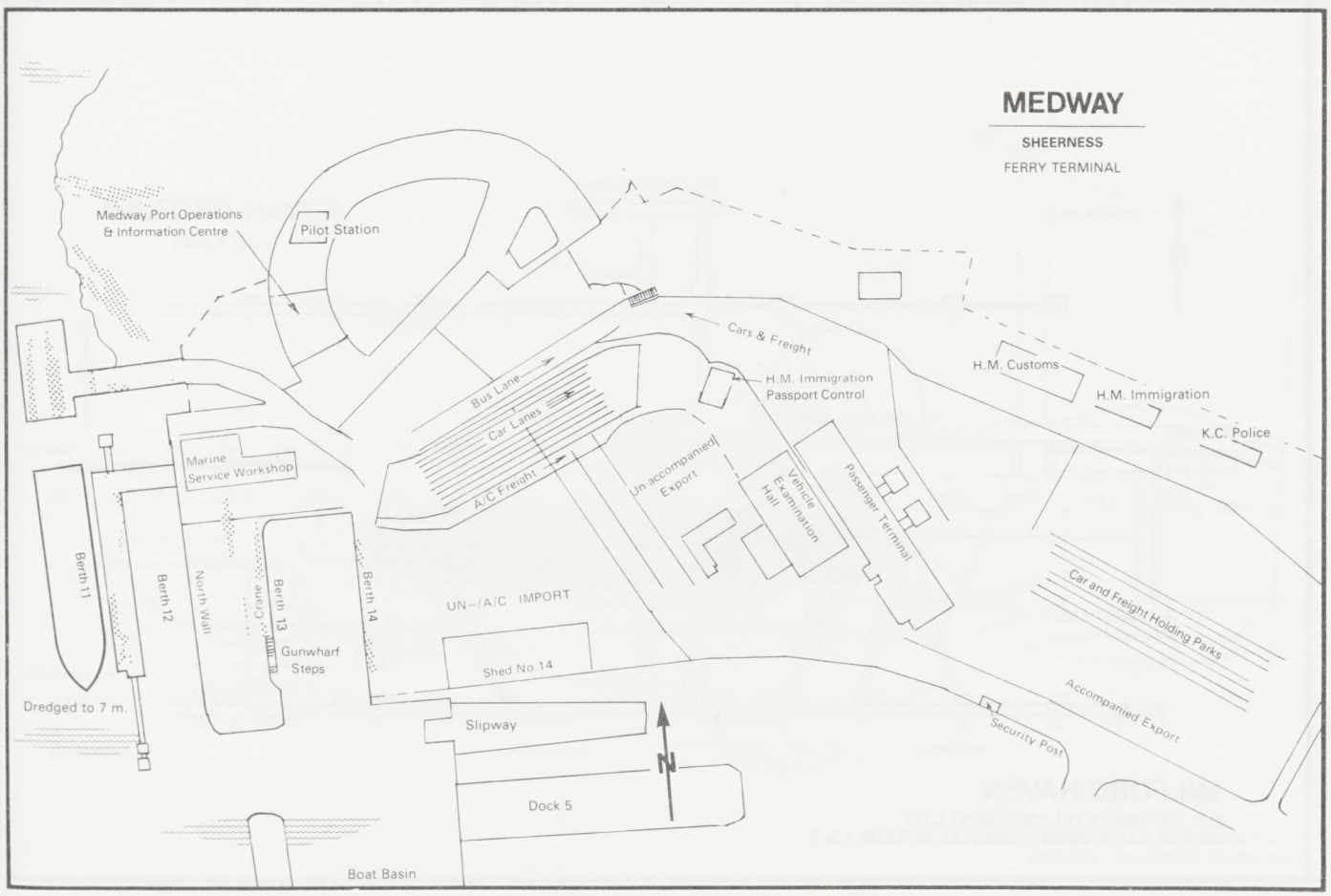
1. INDICATES FIRST LINES ASHORE
2. INDICATES SECOND LINES ASHORE

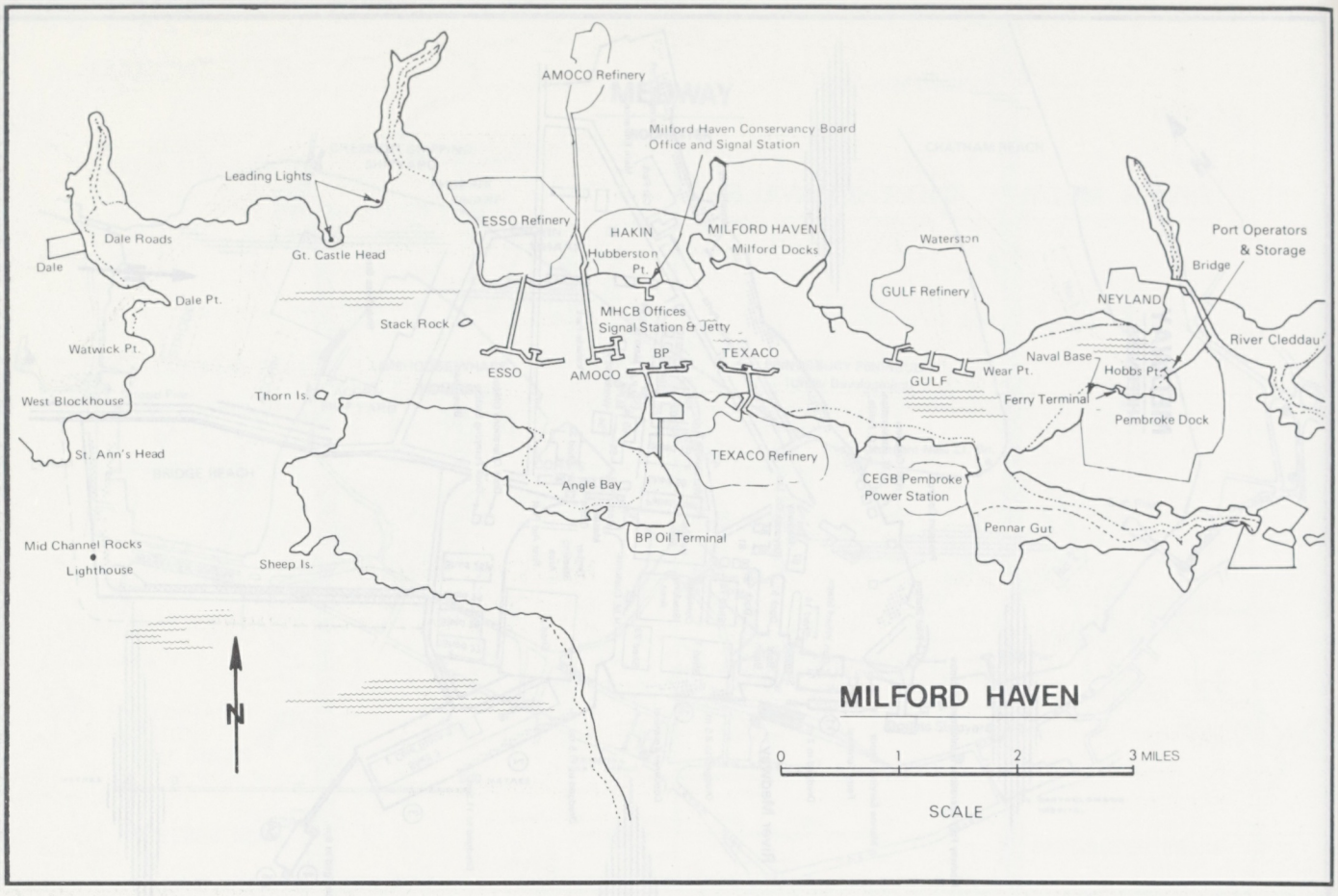
– – – – SHORE WIRES
——— SHIPS WIRES
—— —— POLYPROPELENE

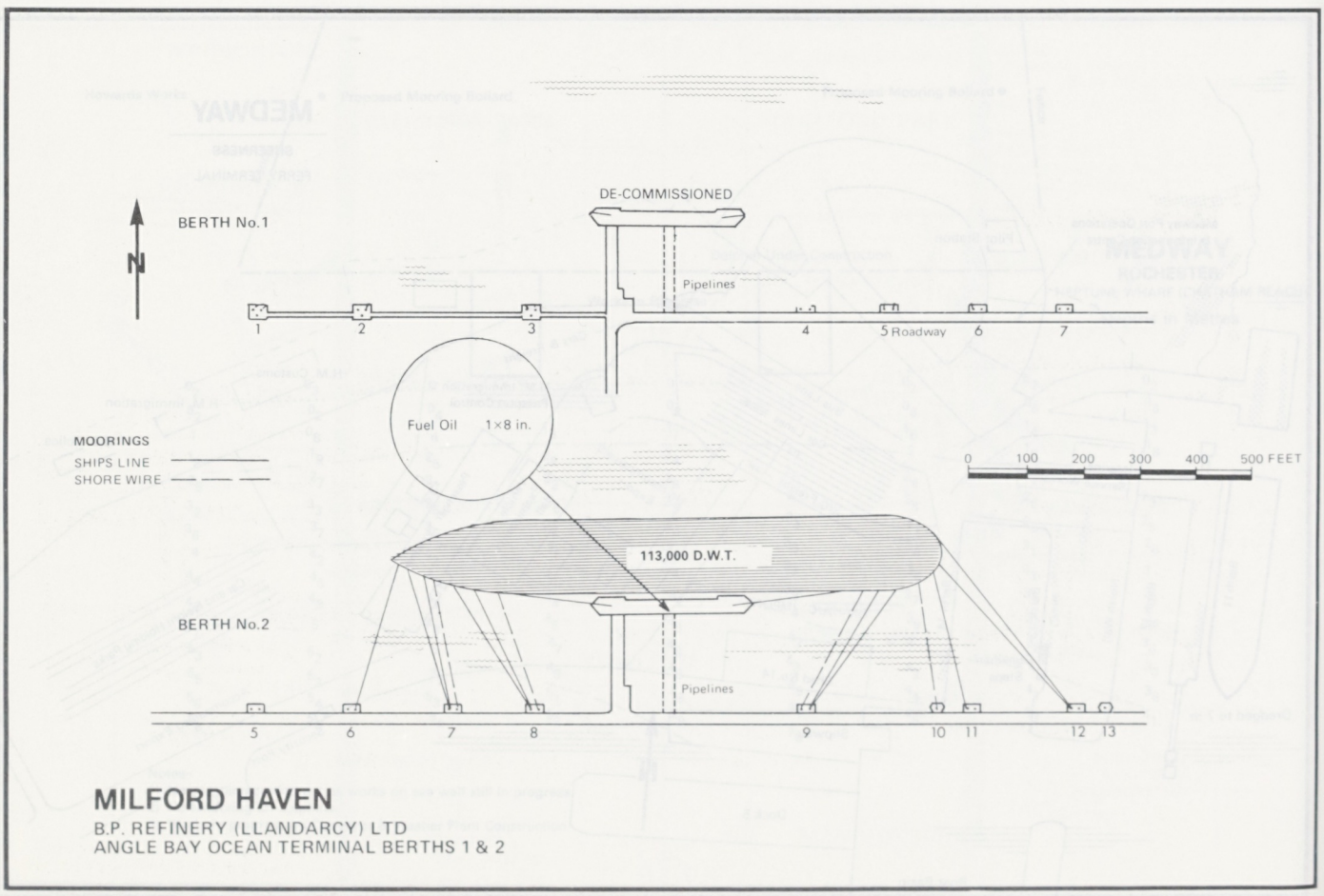

MEDWAY
ROCHESTER
CRESCENT SHIPPING SHIPYARD
PHOENIX WHARF
CROWN WHARF
CHATHAM REACH
N
No.1
STROOD
ACORN
LIMEHOUSE WHARF
HONIGS)
ACORN SHIP YARD
FRINDSBURY PENINSULA
(Under Development)
LIMEHOUSE REACH
Strood Pier
Lynchs
BRIDGE REACH
CORY'S WHARF
Chatham Ness Lt. Bn.
Sun Pier
No.2
Blue Boar Pier
Ship Pier
STANLEY'S WHARF
Dousts Shipyard
GENERAL POST OFFICE
ST BARTHOLOMEWS HOSPITAL
METRES 100 0 500 METRES
SCALE

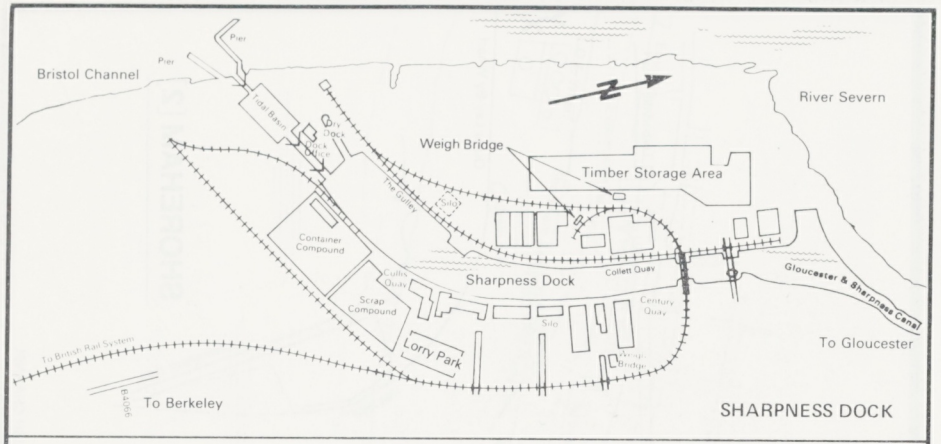

Howards Works
Proposed Mooring Bollard
Proposed Mooring Bollard
Fence
Fence
Dolphin Under Construction
Works in Progress
MEDWAY
ROCHESTER
NEPTUNE WHARF (CHATHAM REACH)
Depths in Metres
Notes–
1) No coastling carried out as works on sea wall still in progress.
2) No fendering on dolphins.
3) Works in progress on Conveyor & Washer Plant Construction.

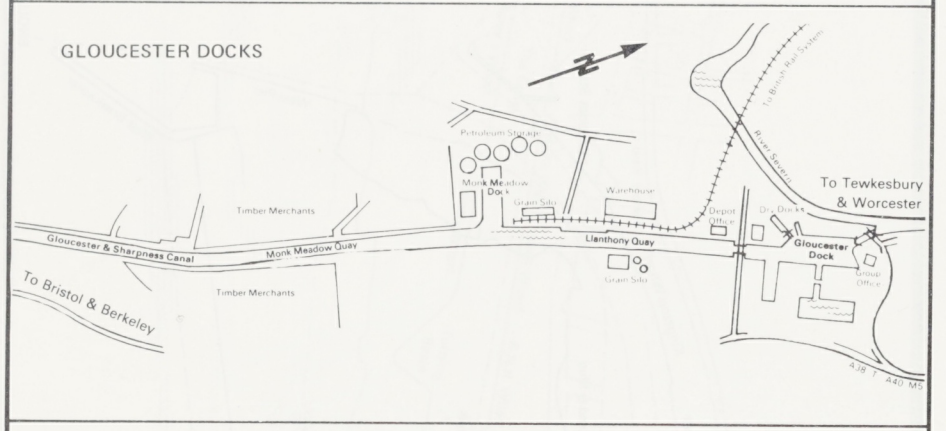

MEDWAY
SHEERNESS
N
Transport Park
Main Entrance
Car Park
Weighbridge
Car & Freight Holding Parks
Sheerness Steel
Vehicle Park
M.P.A. Main Offices
M.P.A. Workshops
Shed 32
Dock Operations Offices
Dock Pumping Station
Blue Town
Warehouse
Shed 70
Shed 69
Pallet Pool
Dock Master's Office
Timber Stacking Area
First Aid Post
Shed 2
Shed 25W
Shed 25
Shed 26
Shed 27
Shed 2A
Shed 3
Cold Store 1
H.M. Customs
H.M. Immigration
K.C. Police
Passport Control
Pilot Station
Medway Port Operations & Information Centre
Marine Services Depot
Ferry Terminal
Gun Wharf Steps
Shed 14
Slipway
Dock 5
Dock 4
Boat Basin
Shed 78
Container Stacking Area
Shed 1
Shed 23
Container Terminal
River Medway
Dredged to 7 m.
Dredged to 8.5 m.
Dredged to 11.5 m.
Dredged to 11.5 m.
Dredged to 9 m.
Shed 11
The Medway Drydock Co. Ltd.

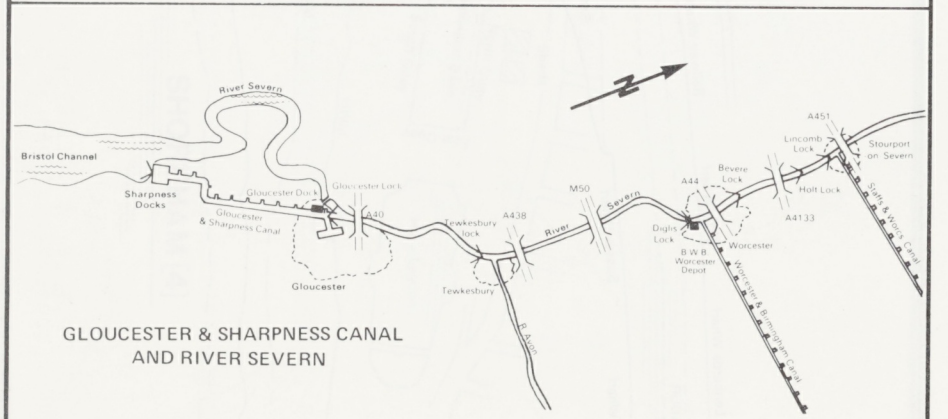

MEDWAY
SHEERNESS
FERRY TERMINAL
Medway Port Operations & Information Centre
Pilot Station
Cars & Freight
H.M. Immigration
Passport Control
H.M. Customs
H.M. Immigration
K.C. Police
Bus Lane
Car Lanes
A/C Freight
Marine Service Workshop
Un-accompanied Export
Vehicle Examination Hall
Passenger Terminal
Car and Freight Holding Parks
Accompanied Export
Security Post
Berth 11
Berth 12
North Wall
Berth 13
Crane
Berth 14
Gunwharf Steps
UN-/A/C IMPORT
Shed No.14
Dredged to 7 m.
Slipway
Dock 5
Boat Basin
N

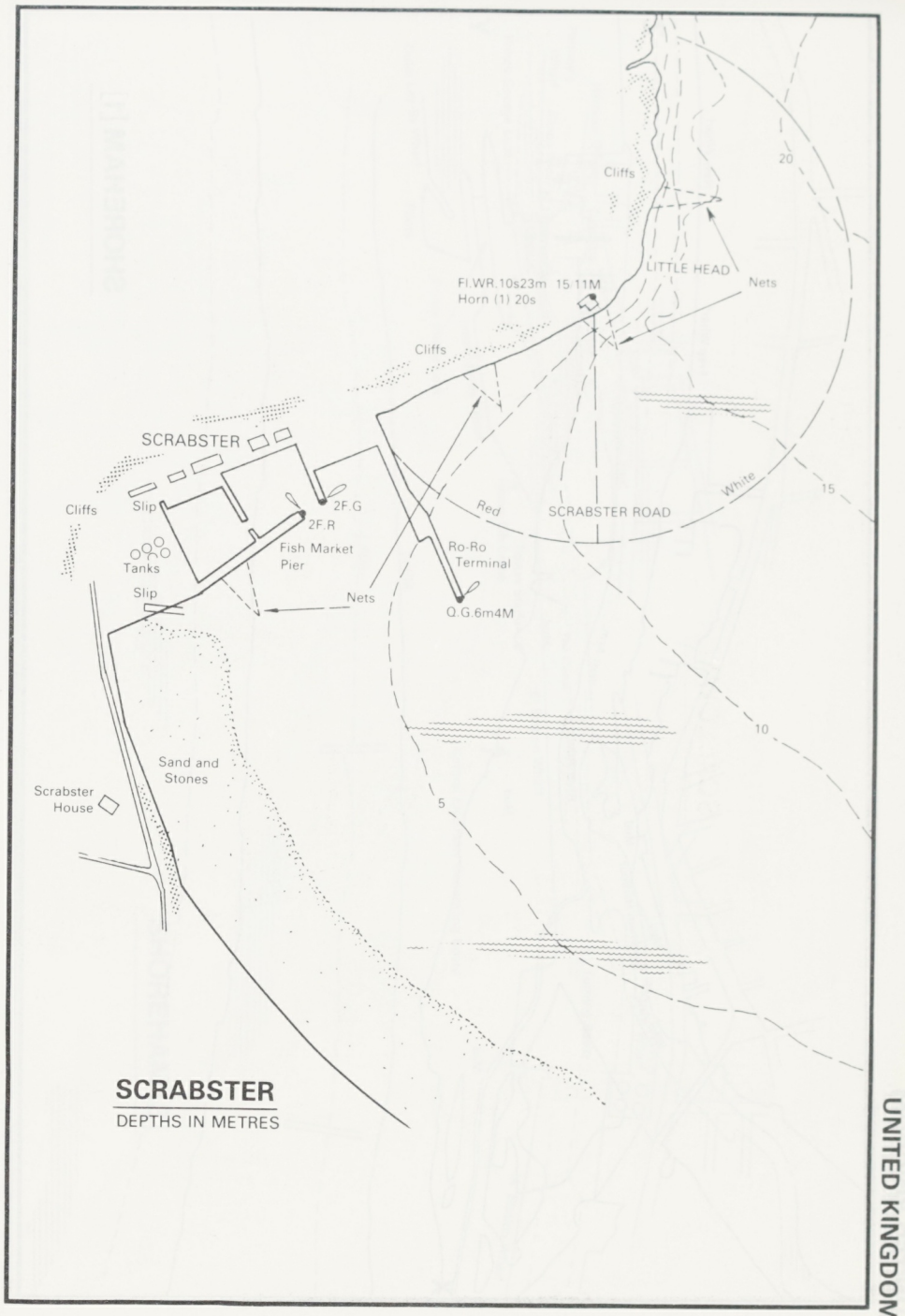

AMOCO Refinery
Milford Haven Conservancy Board
Office and Signal Station
Leading Lights
ESSO Refinery
HAKIN
Hubberston Pt.
MILFORD HAVEN
Milford Docks
Waterston
Port Operators
& Storage
Bridge
Dale Roads
Dale
Gt. Castle Head
GULF Refinery
NEYLAND
Dale Pt.
Stack Rock
MHCB Offices
Signal Station & Jetty
River Cleddau
Watwick Pt.
BP
TEXACO
Naval Base
ESSO
AMOCO
GULF
Wear Pt.
Hobbs Pt.
West Blockhouse
Thorn Is.
Ferry Terminal
Pembroke Dock
St. Ann's Head
TEXACO Refinery
Angle Bay
CEGB Pembroke
Power Station
Pennar Gut
BP Oil Terminal
Mid Channel Rocks
Lighthouse
Sheep Is.
N
MILFORD HAVEN
0 1 2 3 MILES
SCALE

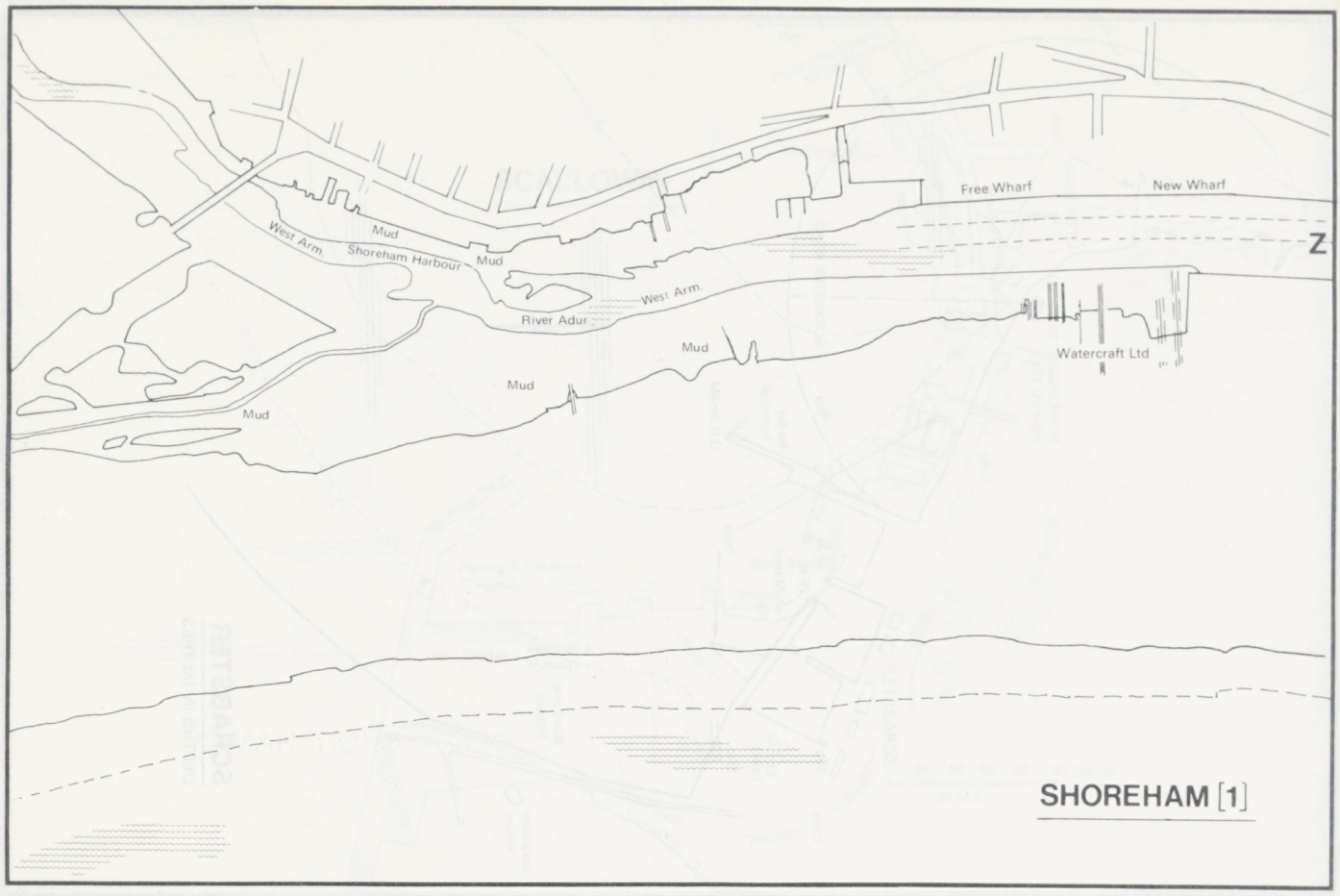

N
BERTH No.1
DE-COMMISSIONED
Pipelines
1 2 3 4 5 Roadway 6 7
Fuel Oil 1×8 in.
MOORINGS
SHIPS LINE
SHORE WIRE
0 100 200 300 400 500 FEET
113,000 D.W.T.
BERTH No.2
Pipelines
5 6 7 8 9 10 11 12 13
MILFORD HAVEN
B.P. REFINERY (LLANDARCY) LTD
ANGLE BAY OCEAN TERMINAL BERTHS 1 & 2

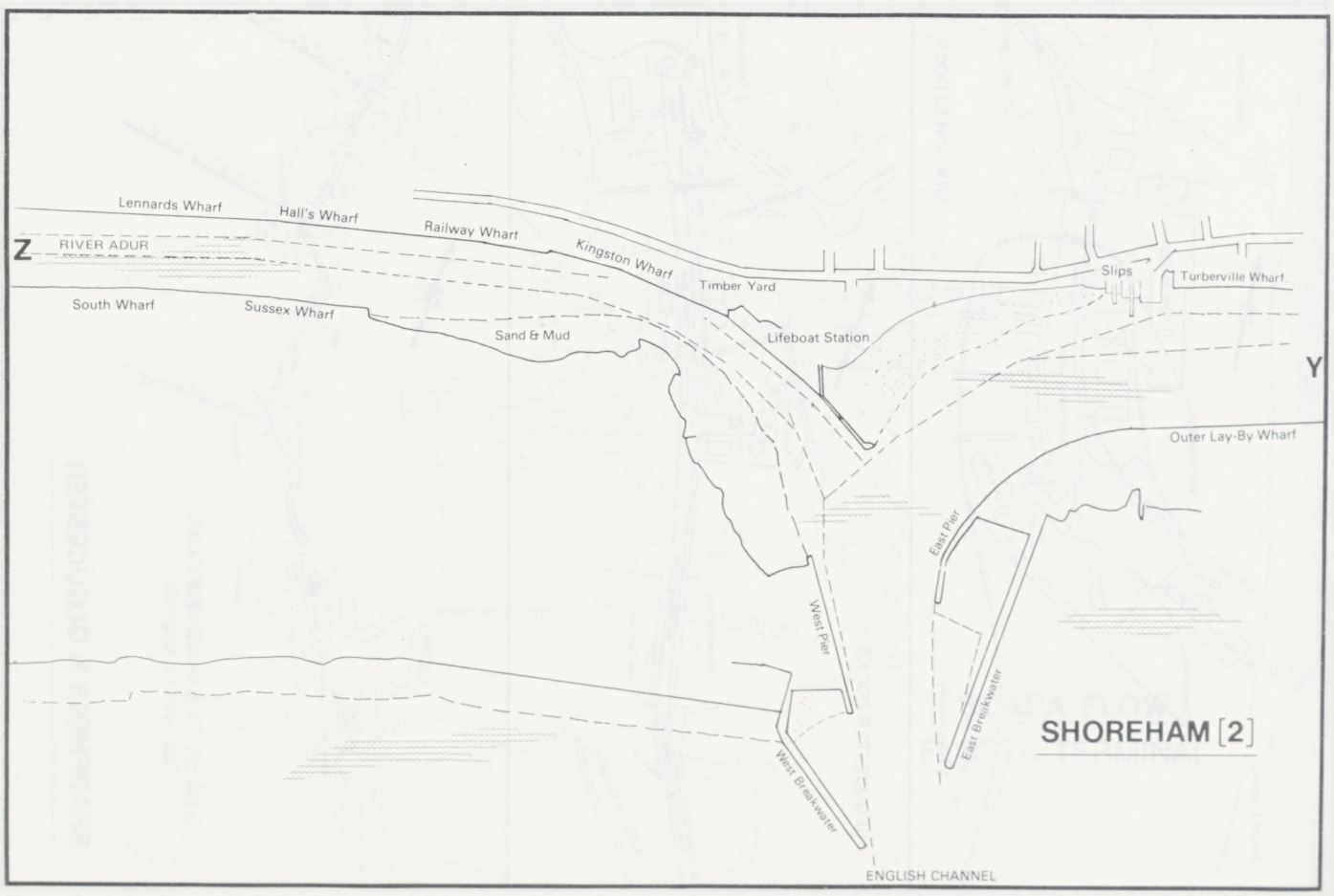

Bristol Channel
Pier
Pier
River Severn
Tidal Basin
Dry Dock
Lock Office
Weigh Bridge
Timber Storage Area
Fire Gulley
Silo
Container Compound
Cutts Quay
Collett Quay
Sharpness Dock
Gloucester & Sharpness Canal
Scrap Compound
Century Quay
Silo
Lorry Park
Swing Bridge
To Gloucester
To Berkeley
SHARPNESS DOCK

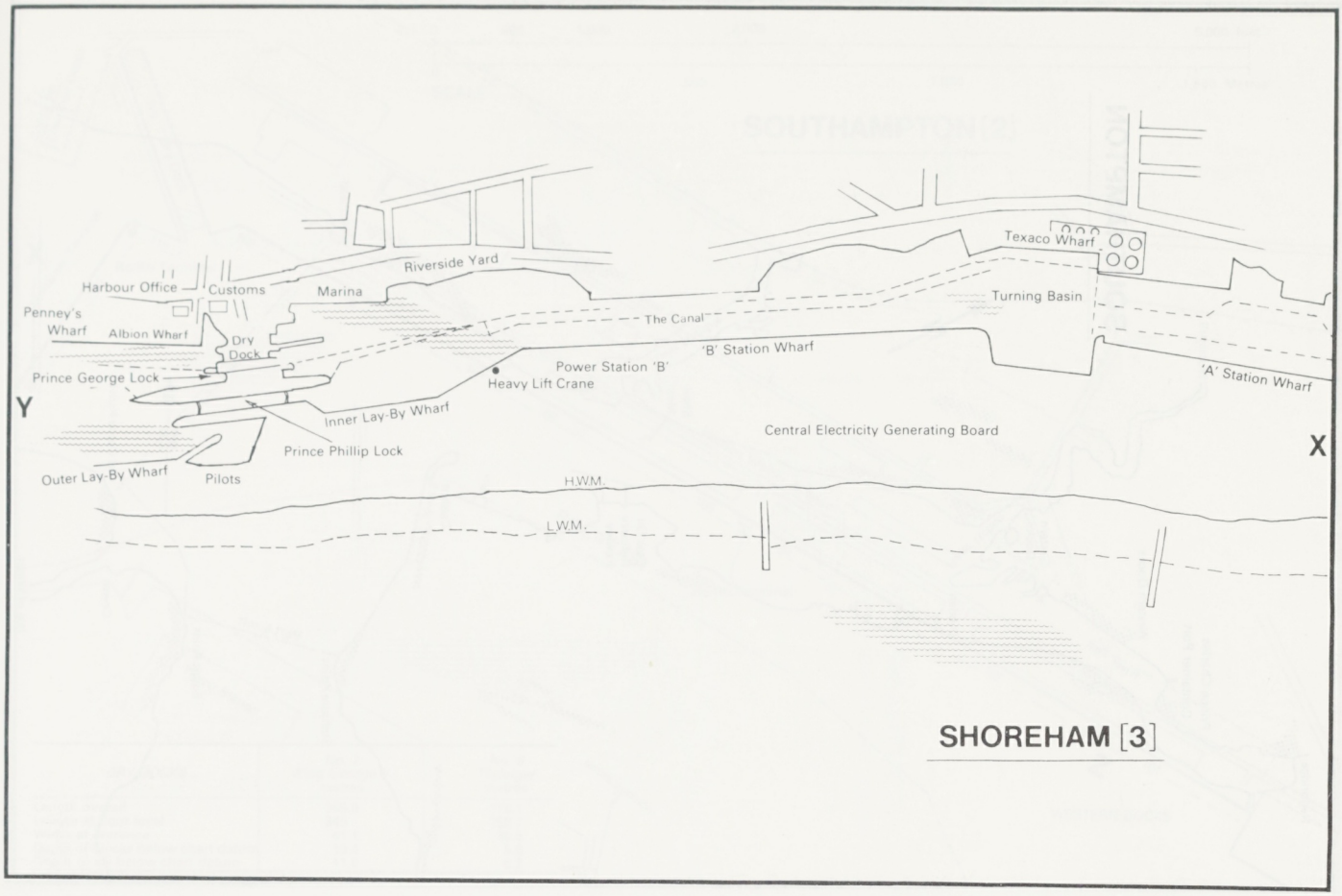

GLOUCESTER DOCKS
To Bristol Rail System
Petroleum Storage
Monk Meadow Dock
Grain Silo
Warehouse
Depot Office
Dry Docks
Brain Sewage
To Tewkesbury & Worcester
Timber Merchants
Gloucester & Sharpness Canal
Monk Meadow Quay
Llanthony Quay
Gloucester Dock
Timber Merchants
Grain Silo
Group Office
To Bristol & Berkeley
A38 · 7 · A40 · M5


River Severn
Bristol Channel
Sharpness Docks
Gloucester Dock
Gloucester Lock
Gloucester & Sharpness Canal
A40
Gloucester
Tewkesbury Lock
A438
Tewkesbury
River Avon
M50
Severn
River
A44
Bevere Lock
Diglis Lock
B.W.B. Worcester Depot
Worcester
Worcester & Birmingham Canal
A451
Lincomb Lock
Holt Lock
A4133
Stourport on Severn
Staffs & Worcs Canal
GLOUCESTER & SHARPNESS CANAL AND RIVER SEVERN
SHARPNESS & GLOUCESTER

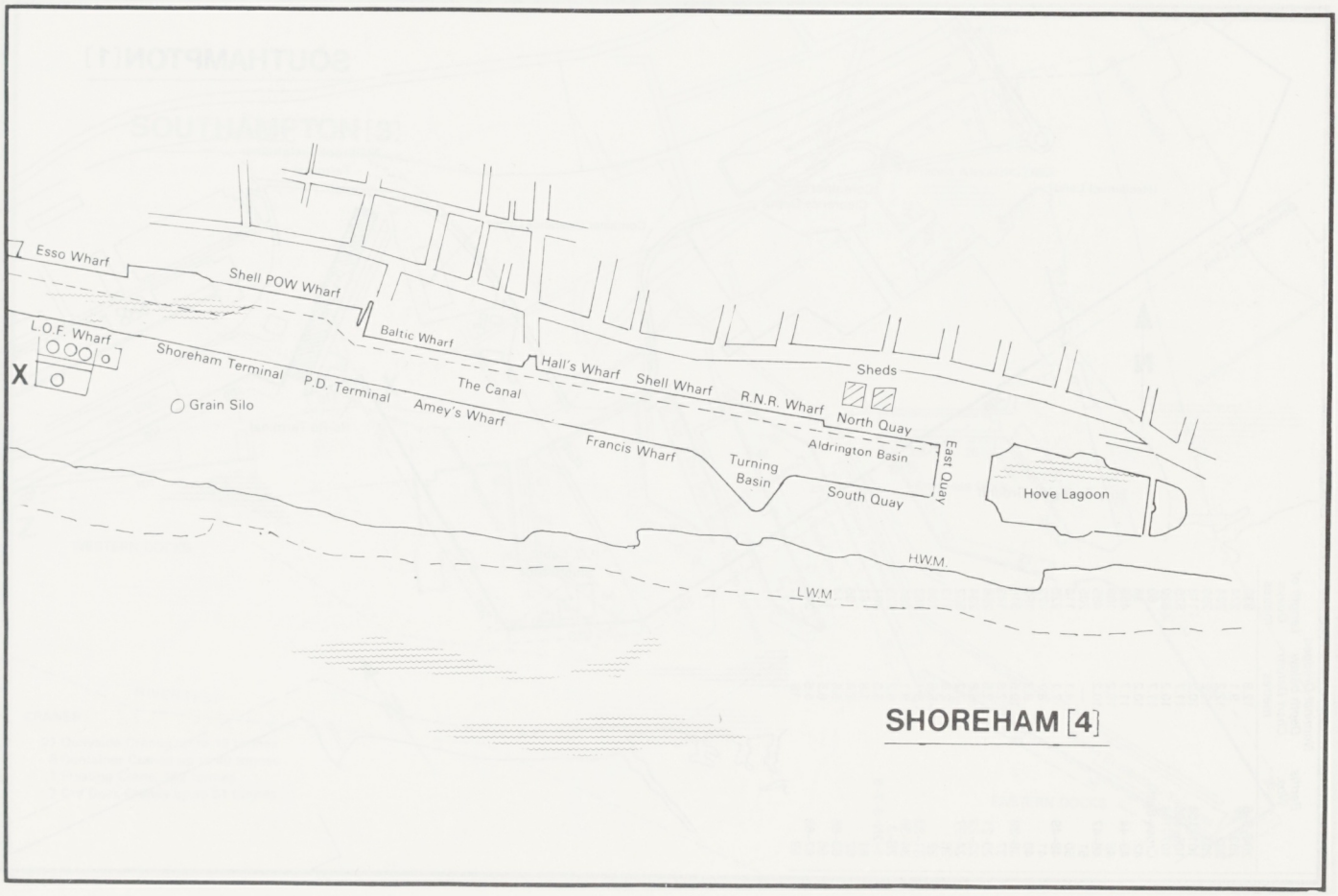

Cliffs
20
LITTLE HEAD
Fl.WR.10s23m 15·11M
Horn (1) 20s
Nets
Cliffs
SCRABSTER
Cliffs
Slip
2F.G
2F.R
Red
SCRABSTER ROAD
White
15
Fish Market Pier
Tanks
Slip
Nets
Ro-Ro Terminal
Q.G.6m4M
10
Sand and Stones
Scrabster House
5
SCRABSTER
DEPTHS IN METRES


Free Wharf
New Wharf
Z
West Arm.
Mud
Shoreham Harbour
Mud
West Arm.
River Adur
Mud
Watercraft Ltd
Mud
Mud
SHOREHAM [1]

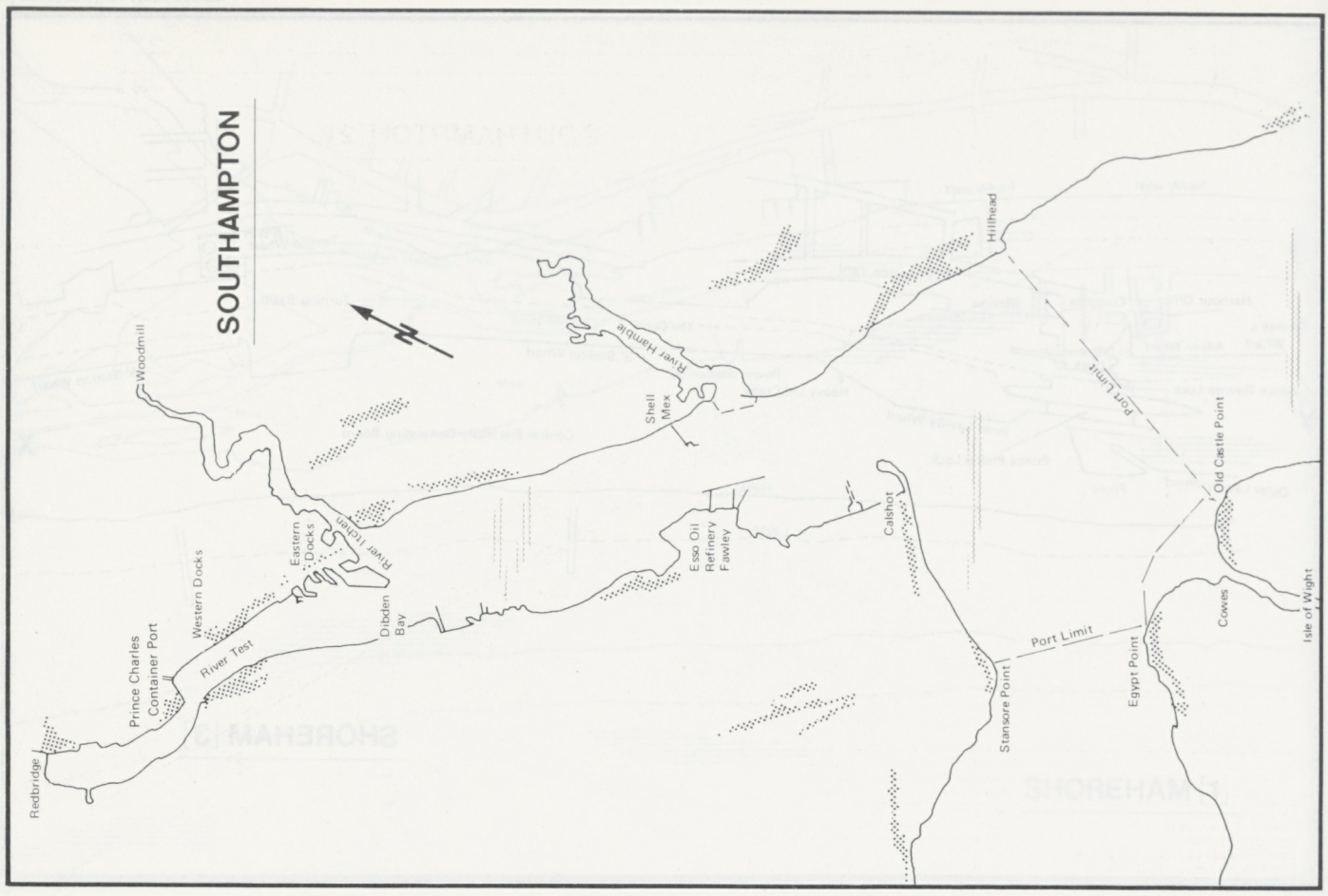

Lennards Wharf
Hall's Wharf
Railway Wharf
Kingston Wharf
Z
RIVER ADUR
Timber Yard
Slips
Turberville Wharf.
South Wharf
Sussex Wharf
Sand & Mud
Lifeboat Station
Y
Outer Lay-By Wharf
East Pier
West Pier
East Breakwater
SHOREHAM [2]
West Breakwater
ENGLISH CHANNEL

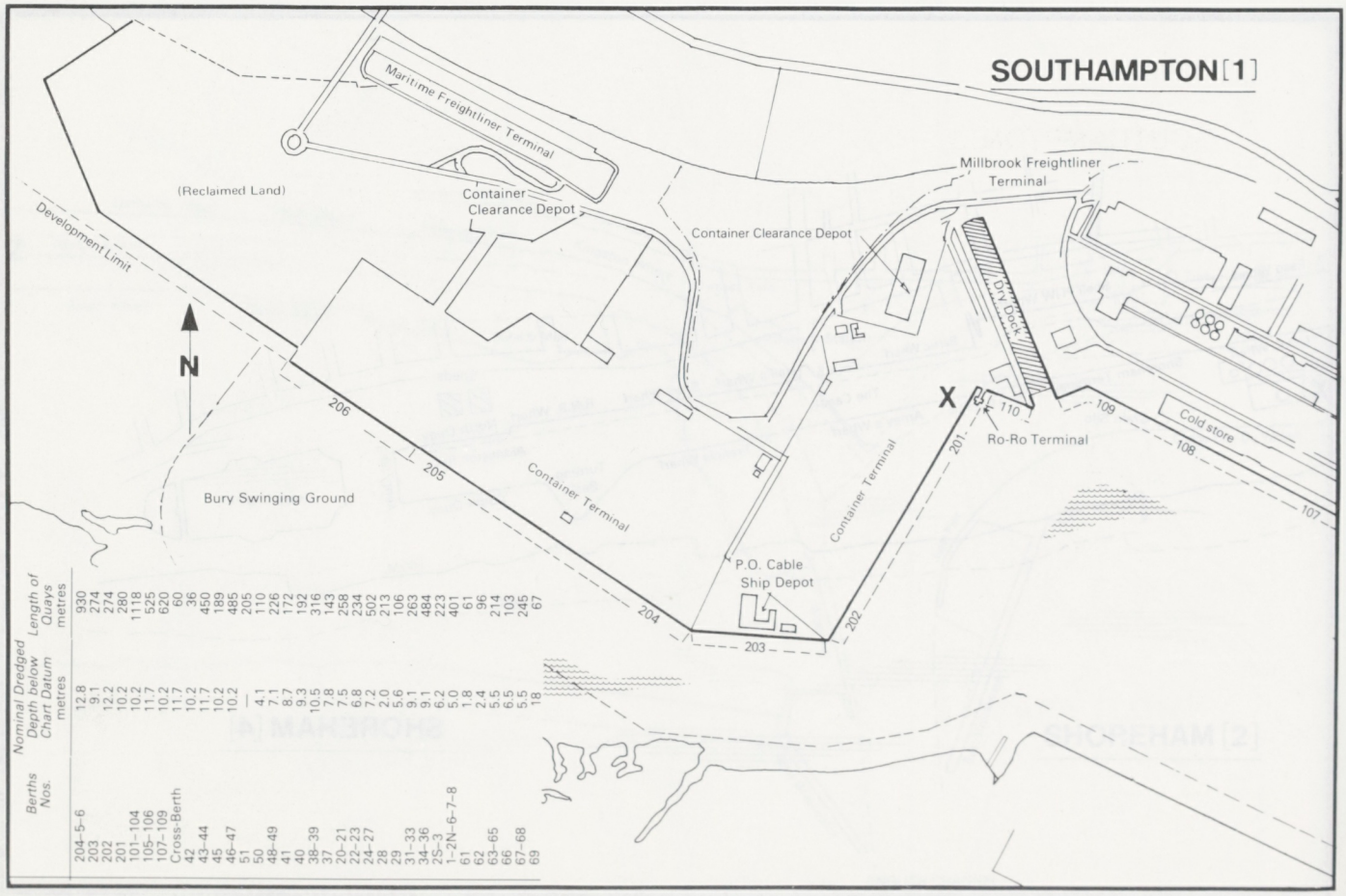


SHOREHAM [3]

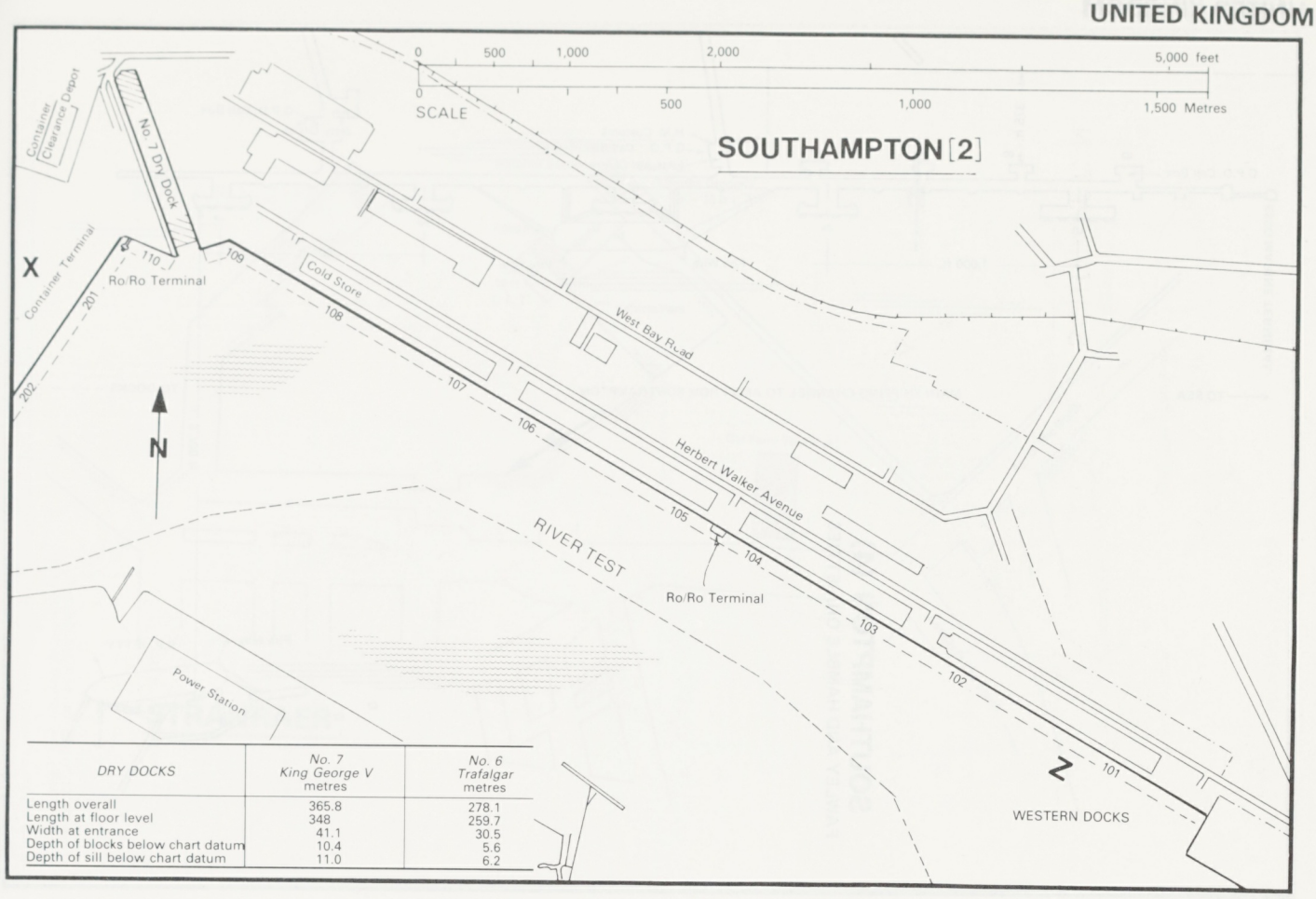


SHOREHAM [4]

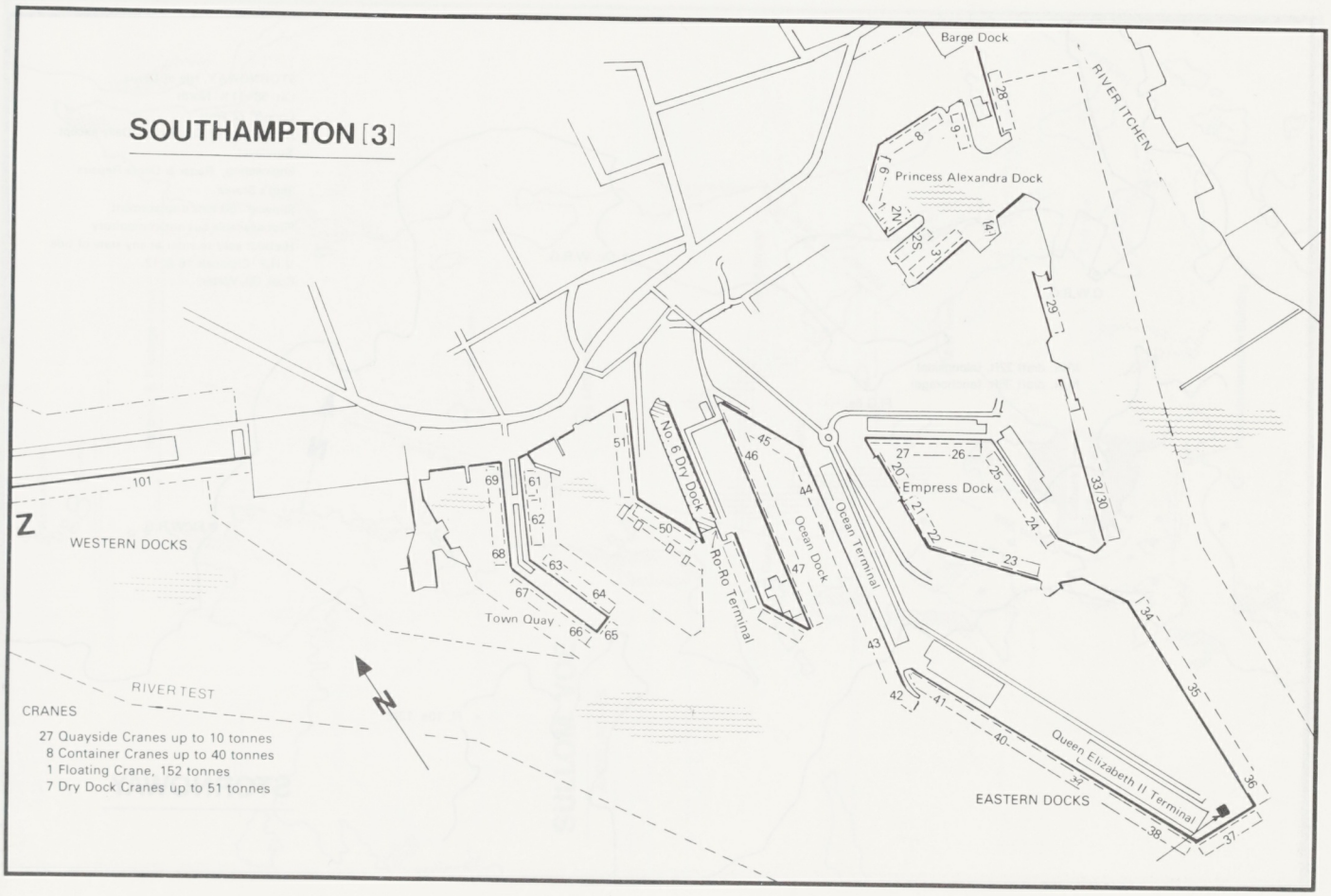


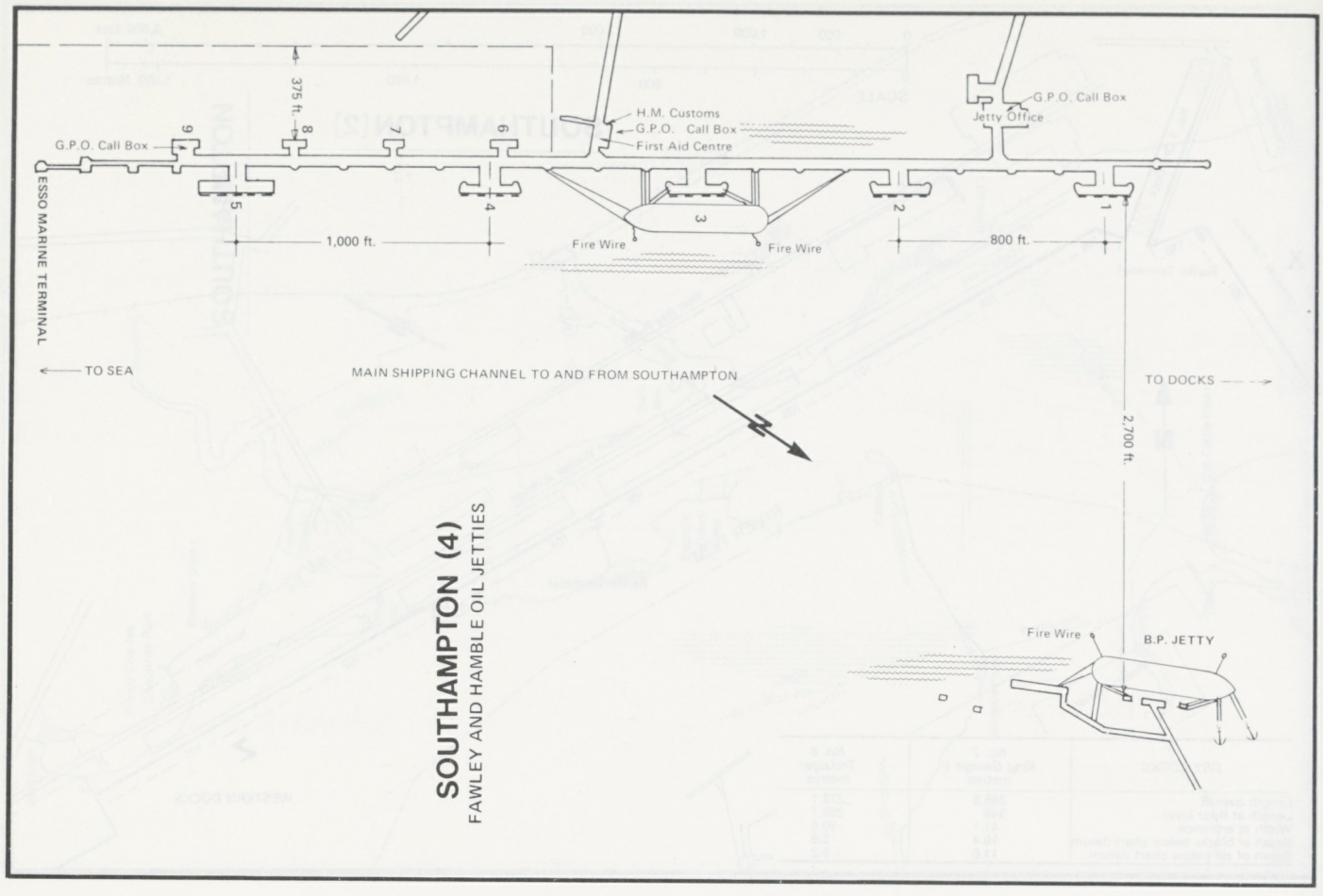


Berths Nos.	Nominal Dredged Depth below Chart Datum metres	Length of Quays metres
204–5–6	12.8	930
203	9.1	274
202	12.2	274
201	10.2	280
101–104	10.2	1118
105–106	11.7	525
107–109	10.2	620
Cross-Berth	11.7	60
42	10.2	36
43–44	11.7	450
45	10.2	189
46–47	10.2	485
51		205
50	4.1	110
48–49	7.1	226
41	8.7	172
40	9.3	192
38–39	10.5	316
37	7.8	143
20–21	7.5	258
22–23	6.8	234
24–27	7.2	502
28	2.0	213
29	5.6	106
31–33	9.1	263
34–36	9.1	484
25–3	6.2	223
1–2N–6–7–8	5.0	401
61	1.8	61
62	2.4	96
63–65	5.5	214
66	6.5	103
67–68	5.5	245
69	18	67



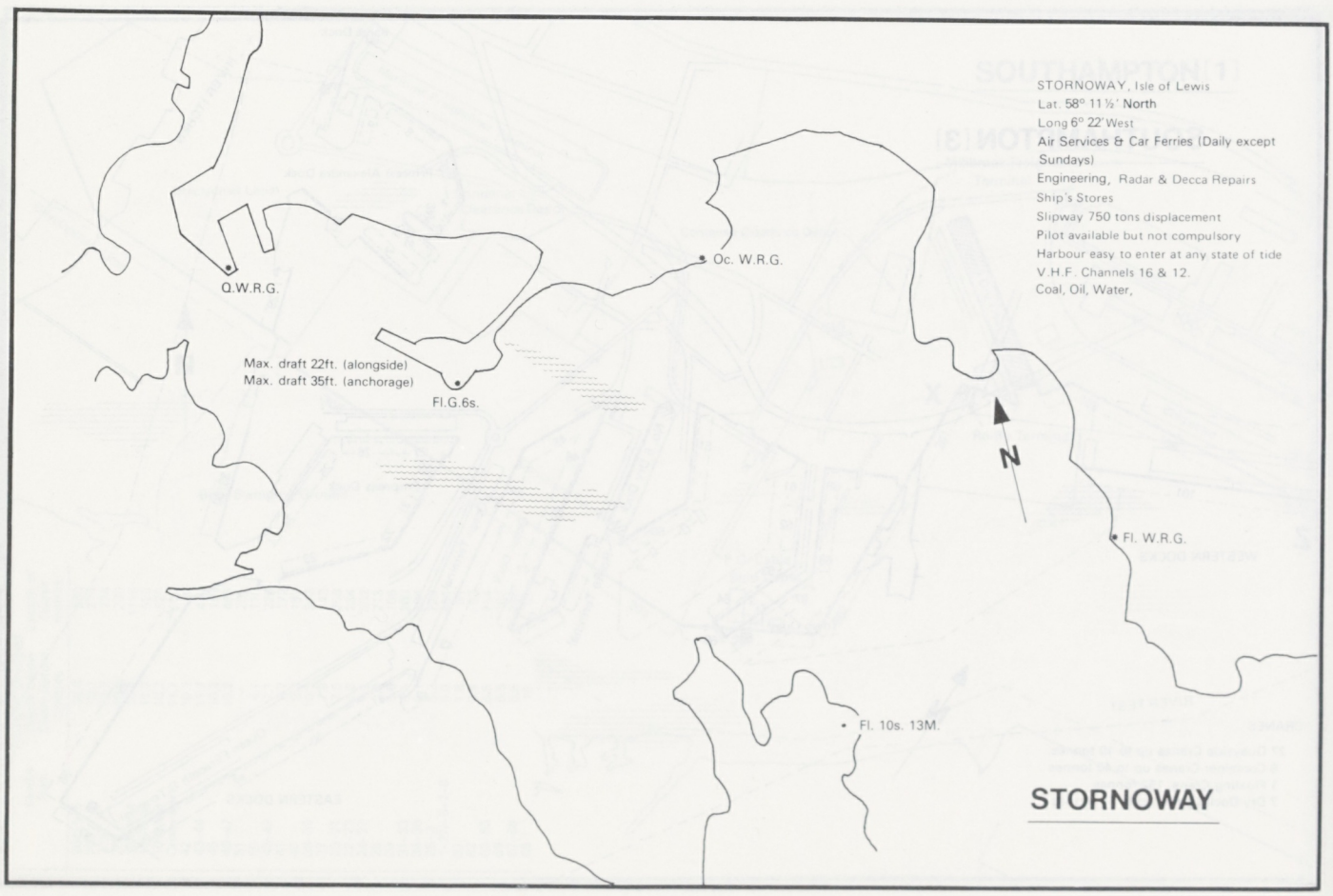
DRY DOCKS	No. 7 King George V metres	No. 6 Trafalgar metres
Length overall	365.8	278.1
Length at floor level	348	259.7
Width at entrance	41.1	30.5
Depth of blocks below chart datum	10.4	5.6
Depth of sill below chart datum	11.0	6.2



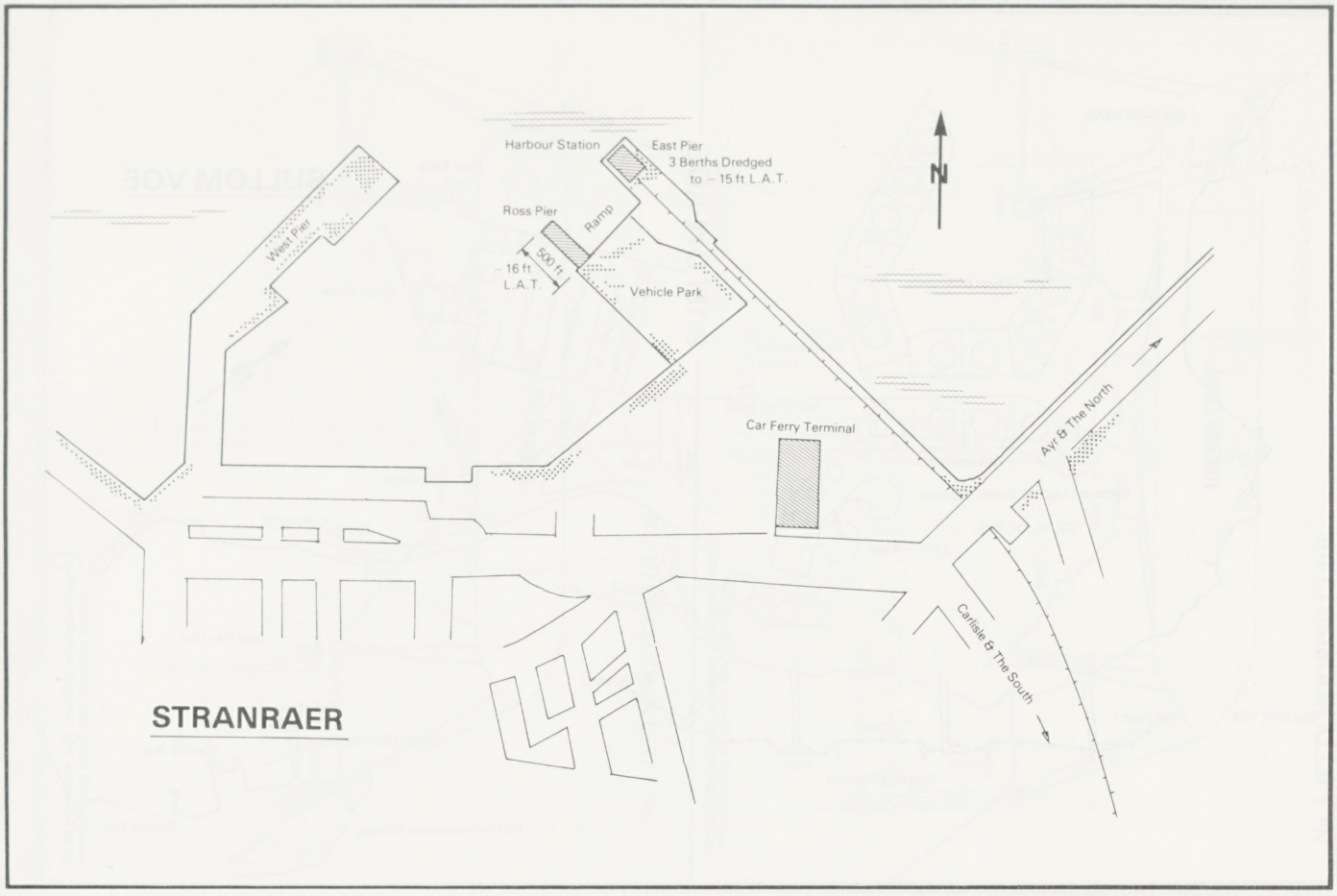


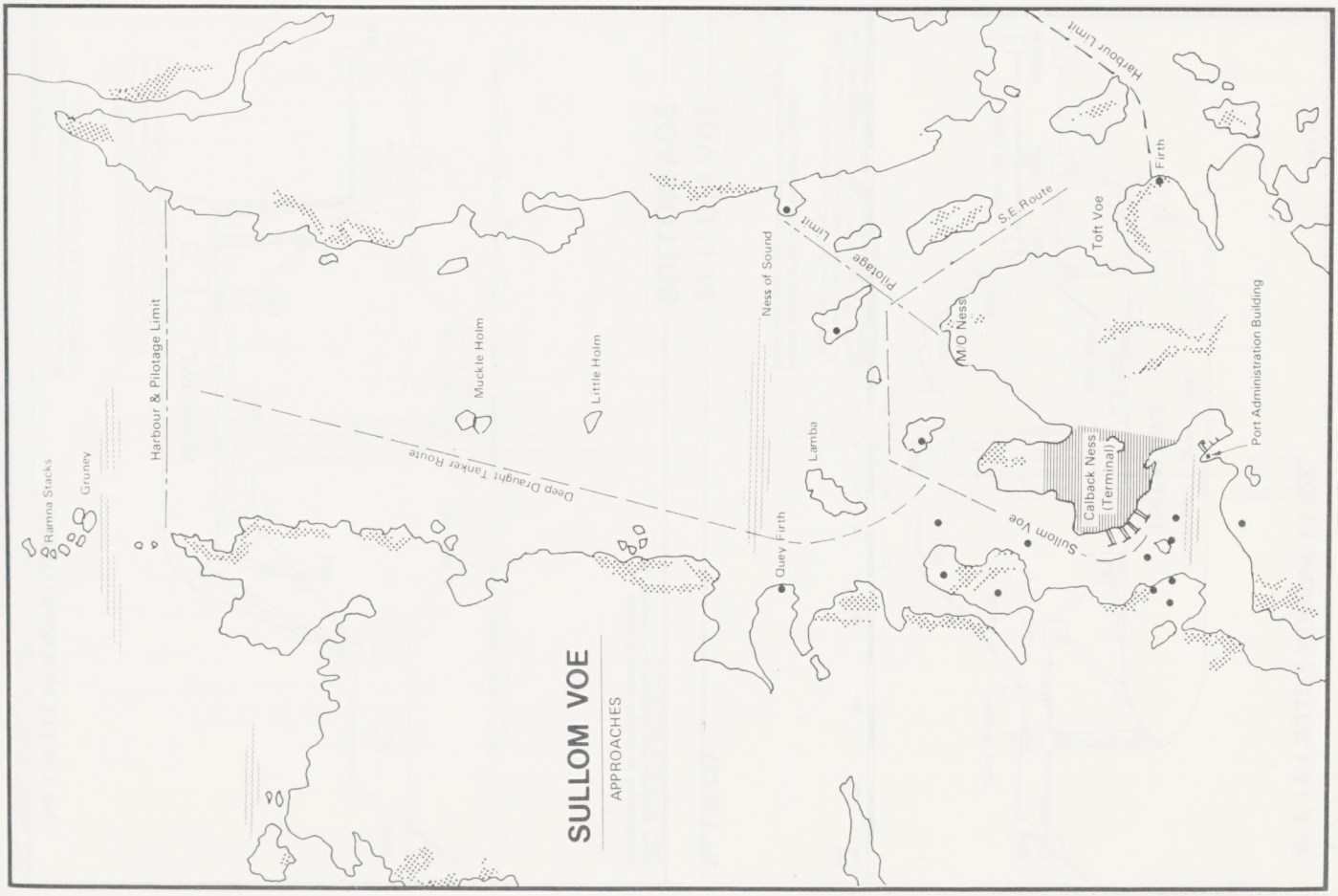
SOUTHAMPTON (4)

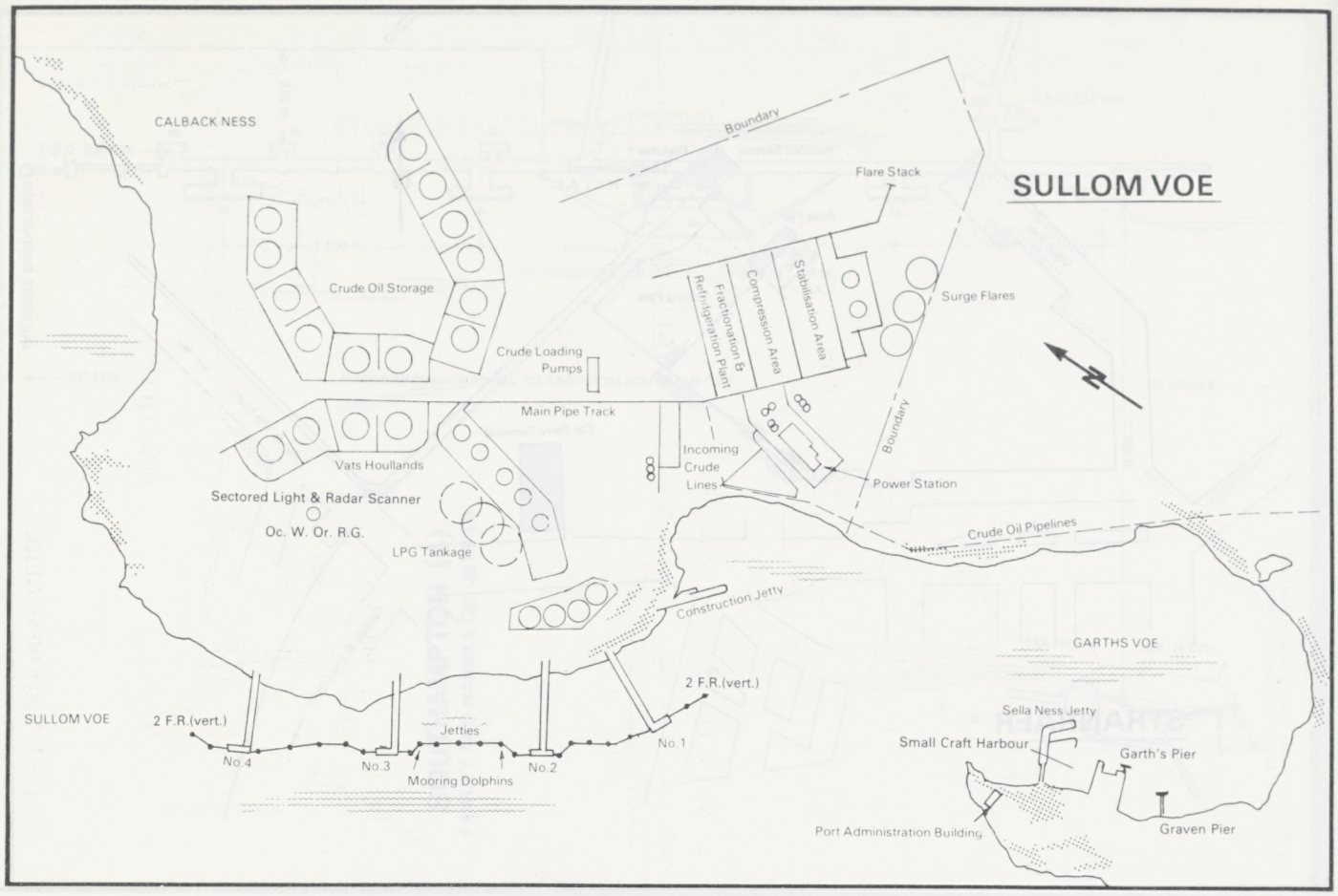
FAWLEY AND HAMBLE OIL JETTIES

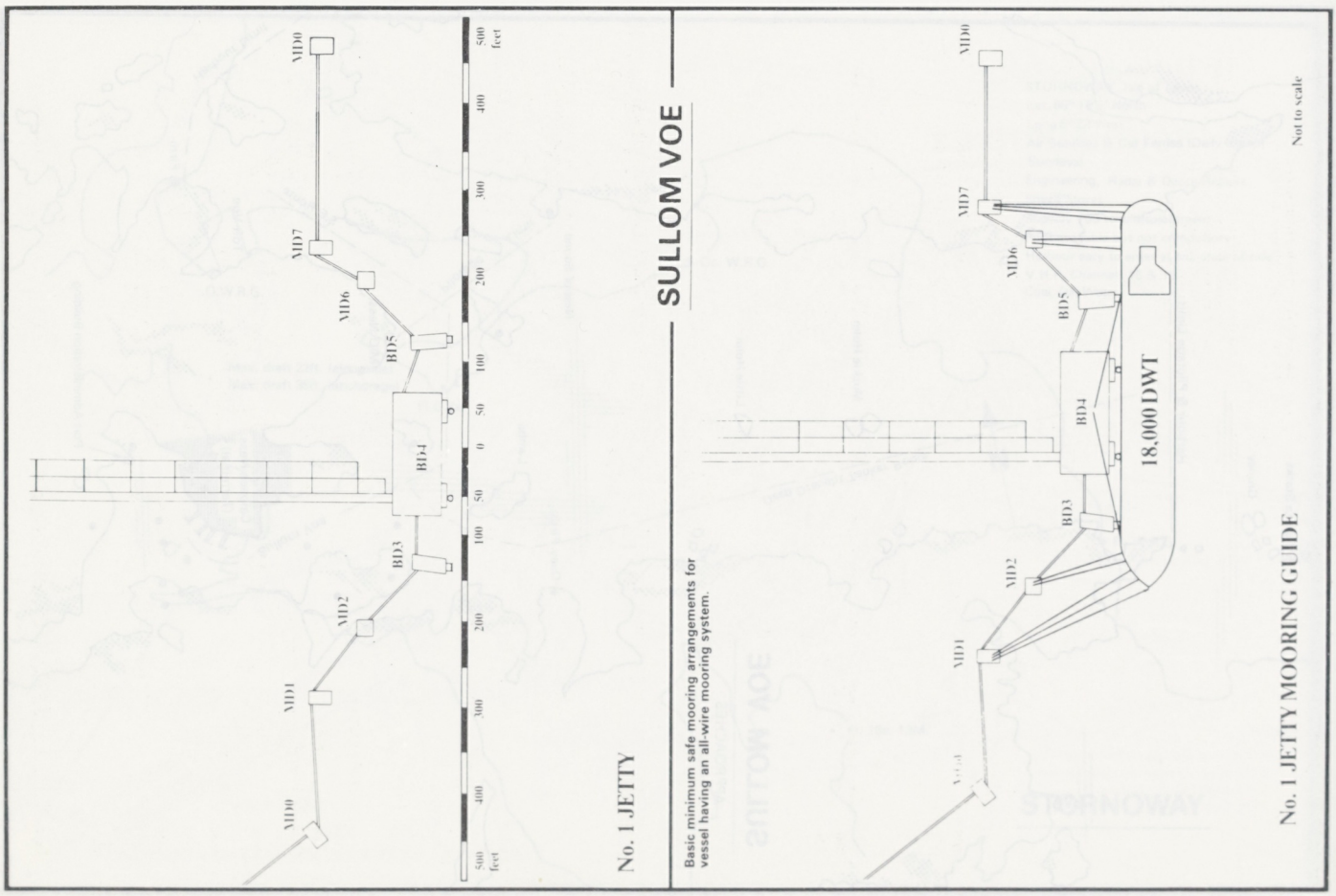


STORNOWAY


Harbour Station
East Pier
3 Berths Dredged
to – 15 ft L.A.T.
N
Ross Pier
Ramp
West Pier
500 ft
– 16 ft
L.A.T.
Vehicle Park
Car Ferry Terminal
Ayr & The North
Carlisle & The South
STRANRAER

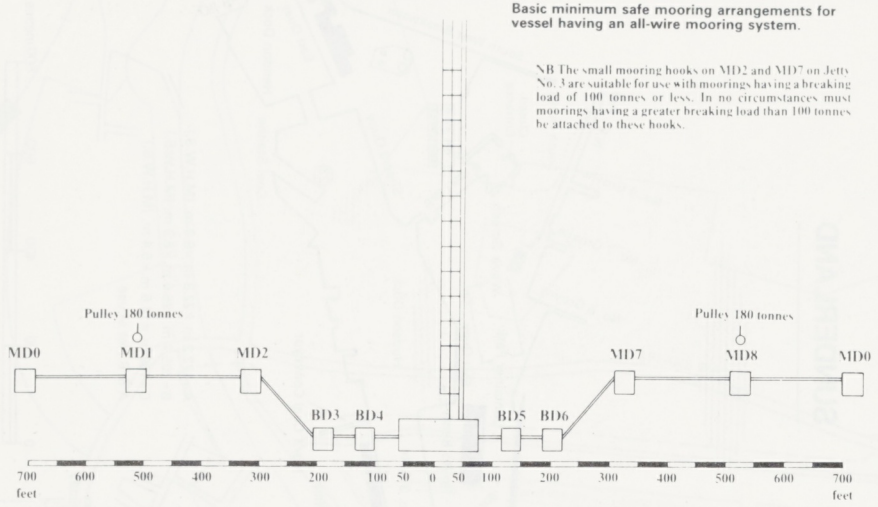

Harbour Limit
Firth
S.E. Route
Pilotage Limit
Toft Voe
Ness of Sound
M O Ness
Harbour & Pilotage Limit
Muckle Holm
Little Holm
Deep Draught Tanker Route
Lamba
Calback Ness
(Terminal)
Port Administration Building
Sullom Voe
Quey Firth
Ramna Stacks
Grunay
SULLOM VOE
APPROACHES


SULLOM VOE
CALBACK NESS
Boundary
Flare Stack
Surge Flares
Crude Oil Storage
Crude Loading Pumps
Fractionation & Refrigeration Plant
Compression Area
Stabilisation Area
Main Pipe Track
Incoming Crude Lines
Boundary
Power Station
Vats Houllands
Sectored Light & Radar Scanner
Oc. W. Or. R.G.
LPG Tankage
Crude Oil Pipelines
Construction Jetty
GARTHS VOE
SULLOM VOE
2 F.R.(vert.)
2 F.R.(vert.)
Jetties
No.4
No.3
No.2
No.1
Mooring Dolphins
Sella Ness Jetty
Small Craft Harbour
Garth's Pier
Port Administration Building
Graven Pier


MD0
MD7
MD6
BD5
BD4
BD3
MD2
MD1
MD0
500 400 300 200 100 0 50 100 200 300 400 500 feet
No. 1 JETTY
SULLOM VOE
Basic minimum safe mooring arrangements for vessel having an all-wire mooring system.
18,000 DWT
Not to scale
No. 1 JETTY MOORING GUIDE

Basic minimum safe mooring arrangements for vessel having an all-wire mooring system.

NB The small mooring hooks on MD2 and MD7 on Jetty No. 3 are suitable for use with moorings having a breaking load of 100 tonnes or less. In no circumstances must moorings having a greater breaking load than 100 tonnes be attached to these hooks.

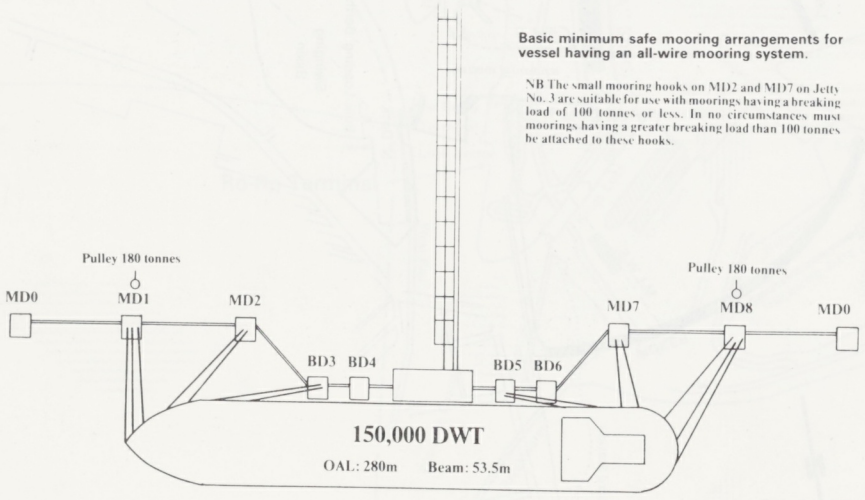


No. 2, 3 & 4 JETTIES

SULLOM VOE

Basic minimum safe mooring arrangements for vessel having an all-wire mooring system.

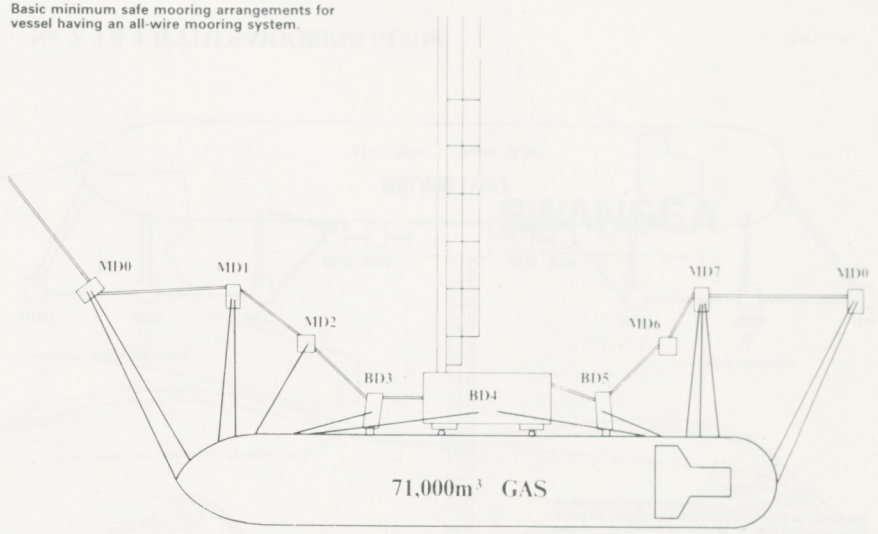
NB The small mooring hooks on MD2 and MD7 on Jetty No. 3 are suitable for use with moorings having a breaking load of 100 tonnes or less. In no circumstances must moorings having a greater breaking load than 100 tonnes be attached to these hooks.



No. 2, 3 & 4 JETTIES MOORING GUIDE

Not to scale

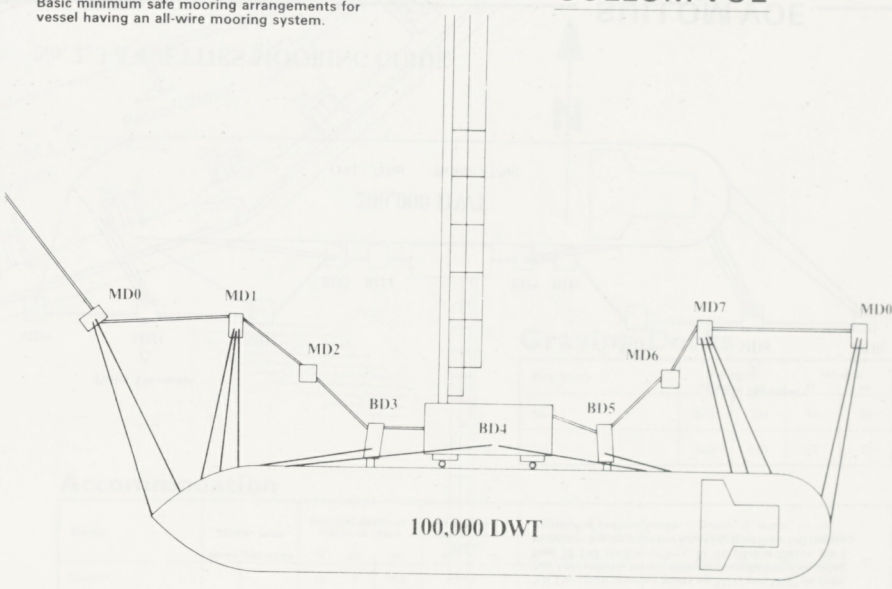
Basic minimum safe mooring arrangements for vessel having an all-wire mooring system.



No. 1 JETTY MOORING GUIDE

SULLOM VOE

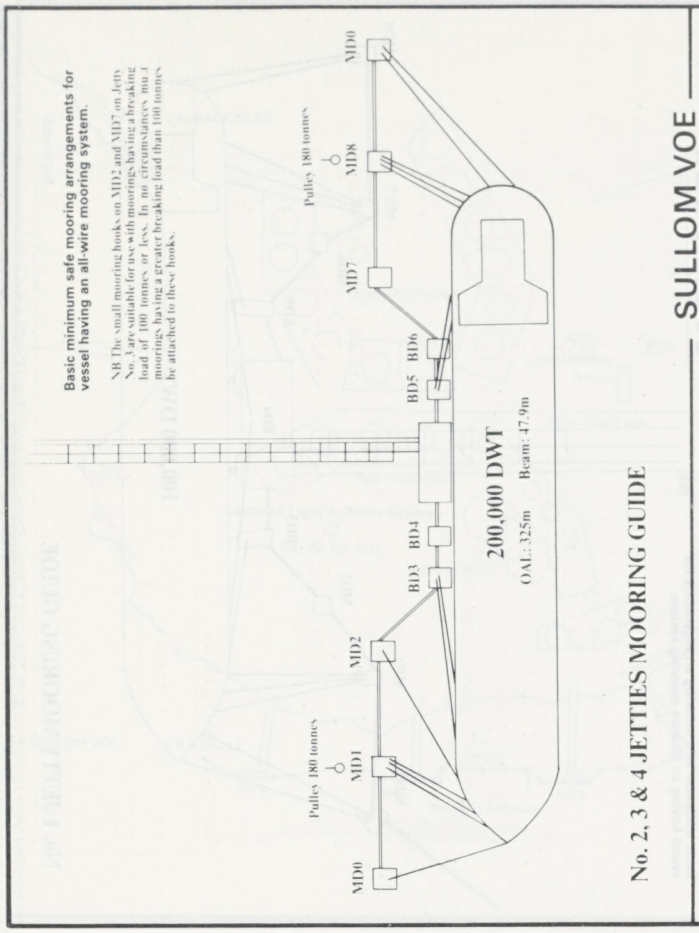
Basic minimum safe mooring arrangements for vessel having an all-wire mooring system.

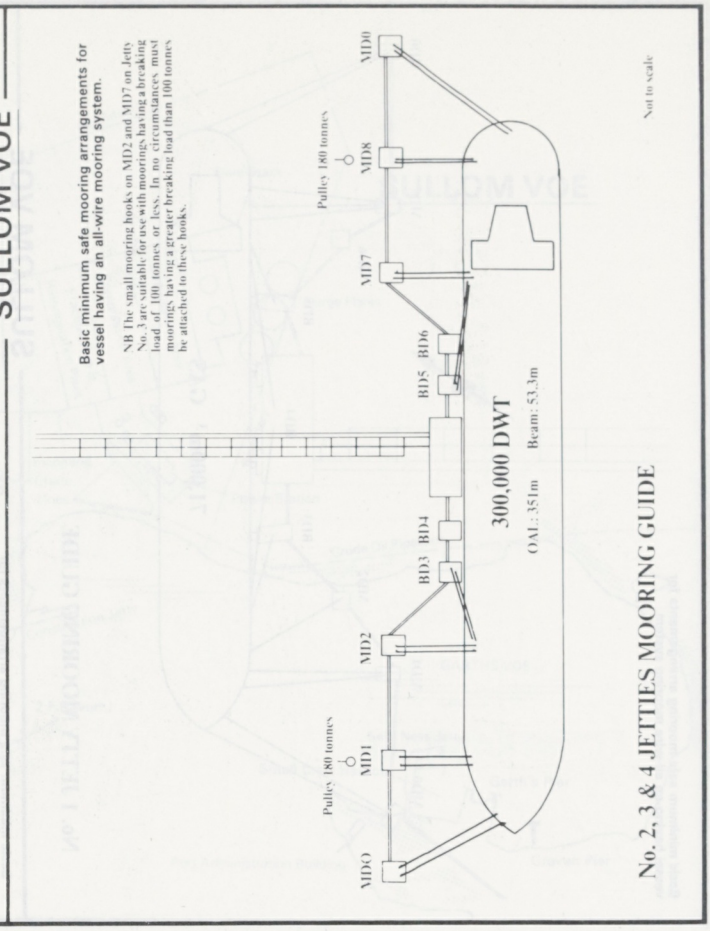


No. 1 JETTY MOORING GUIDE

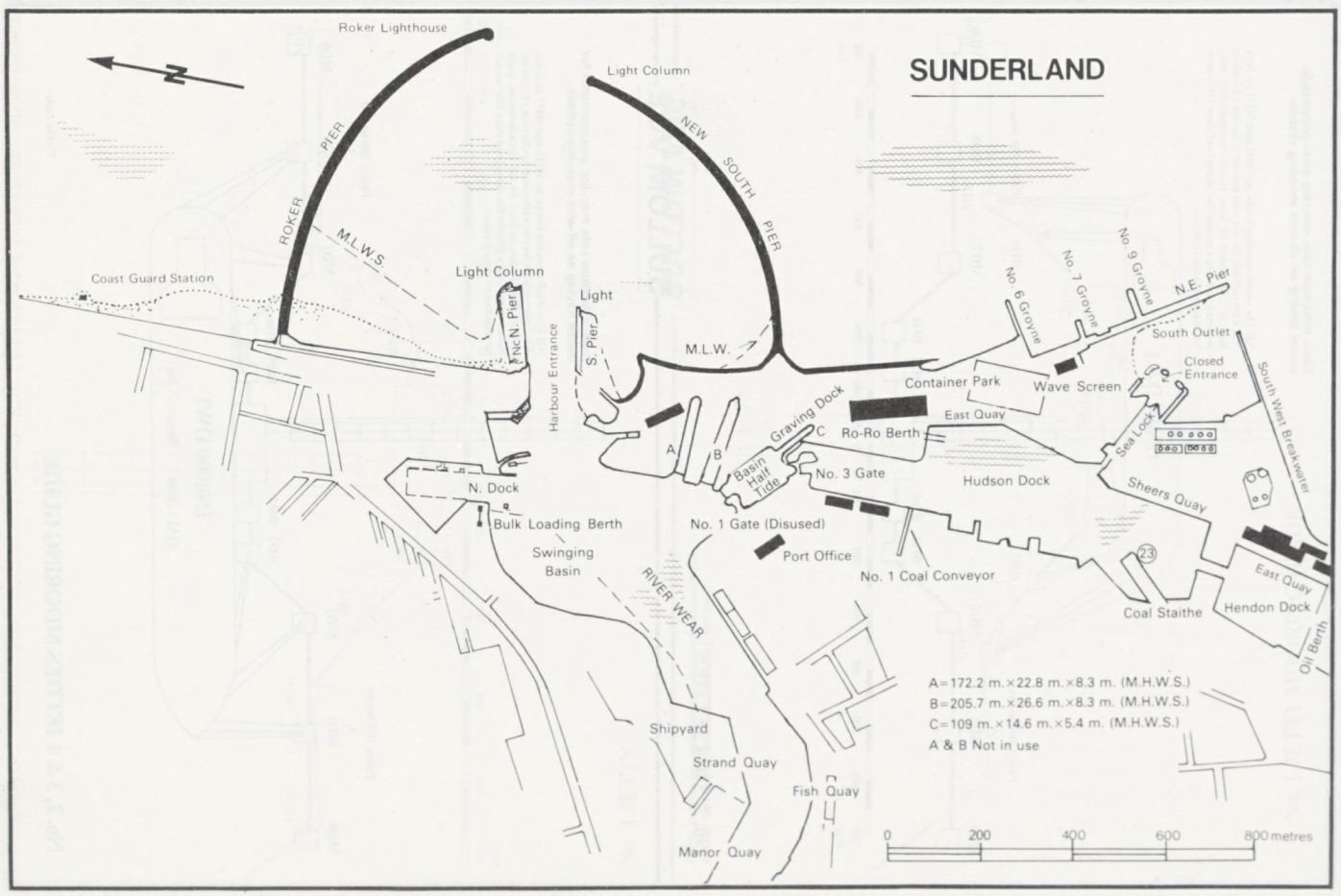
Not to scale

SULLOM VOE

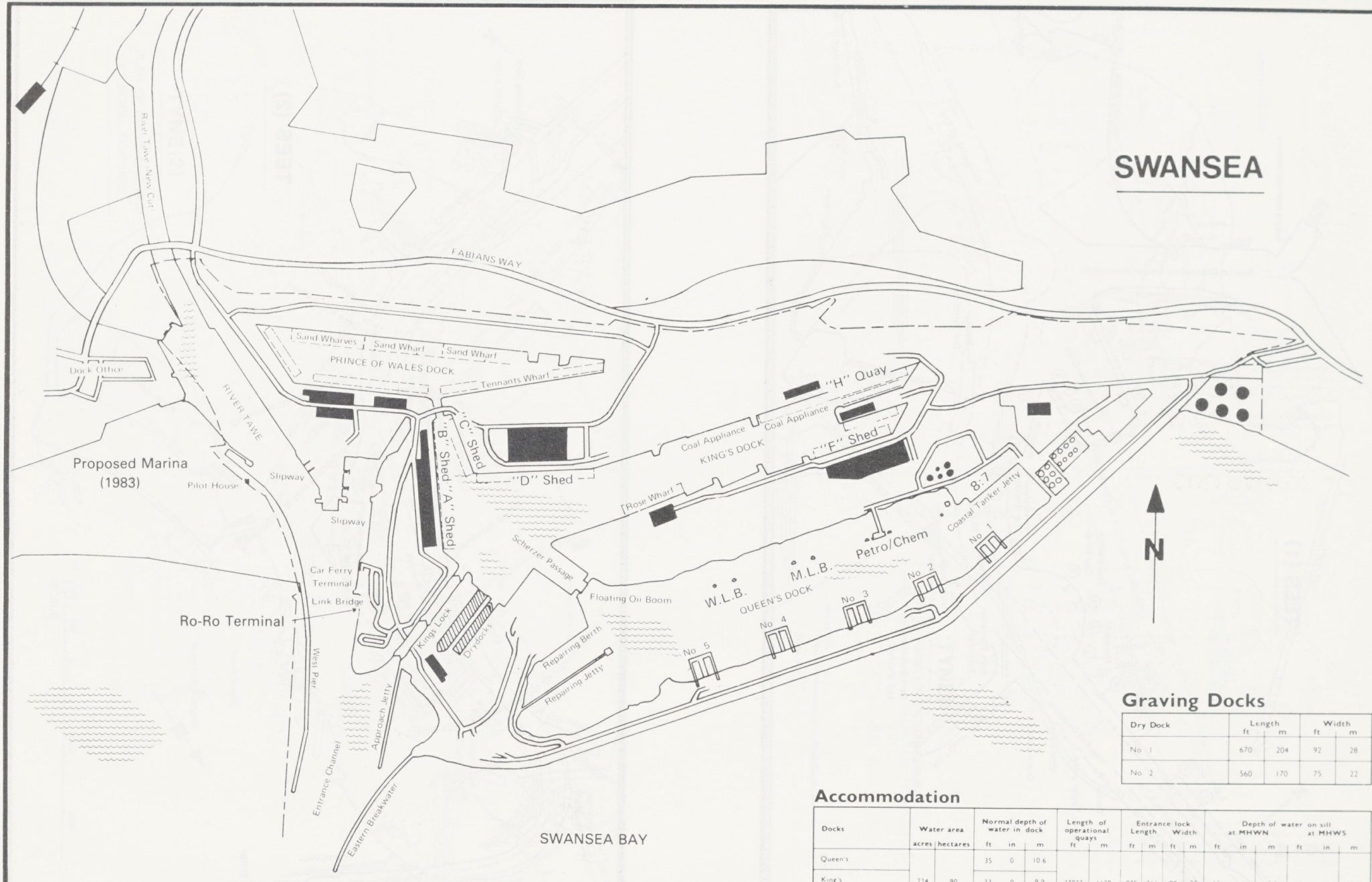




SUNDERLAND



SWANSEA

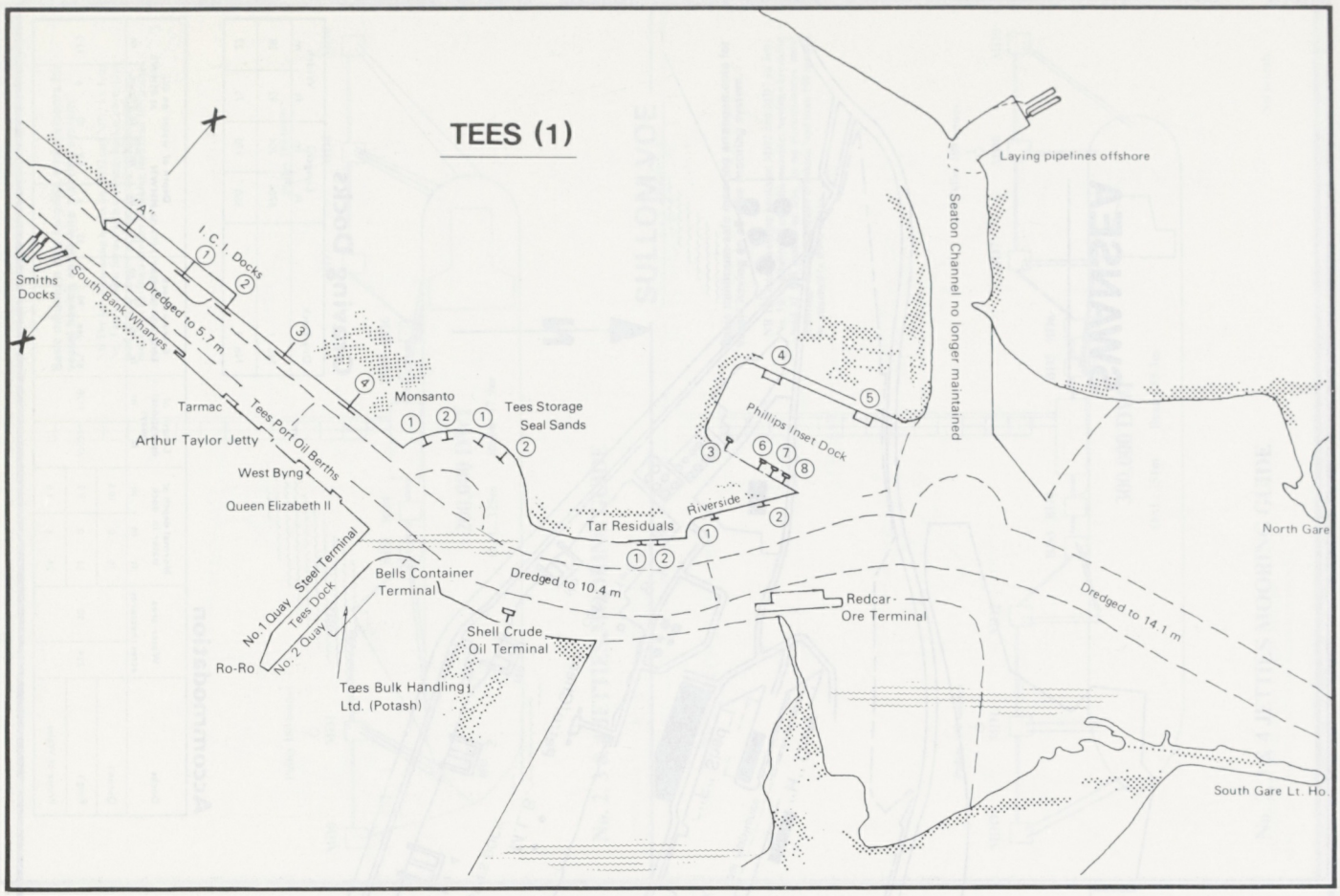


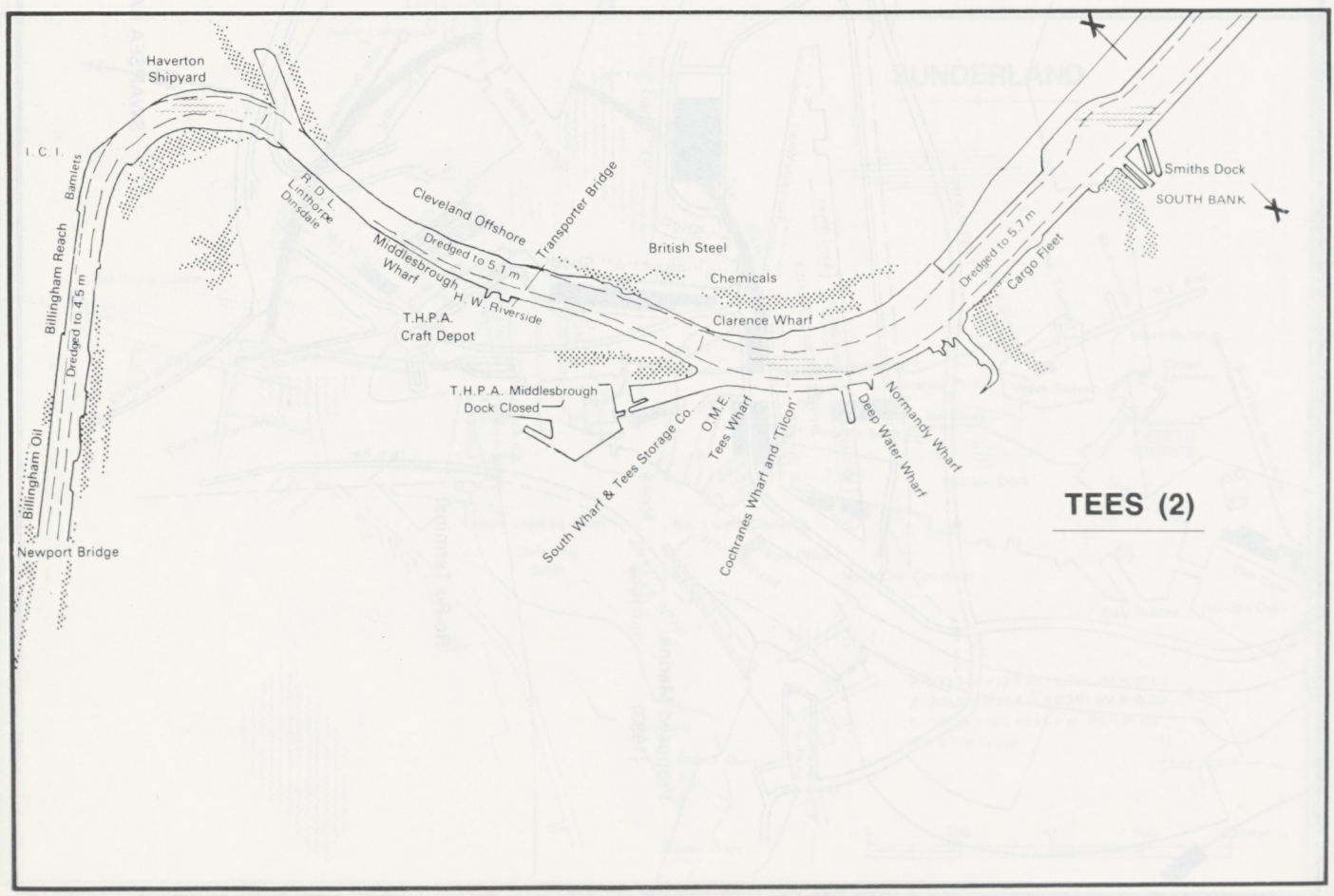
Graving Docks

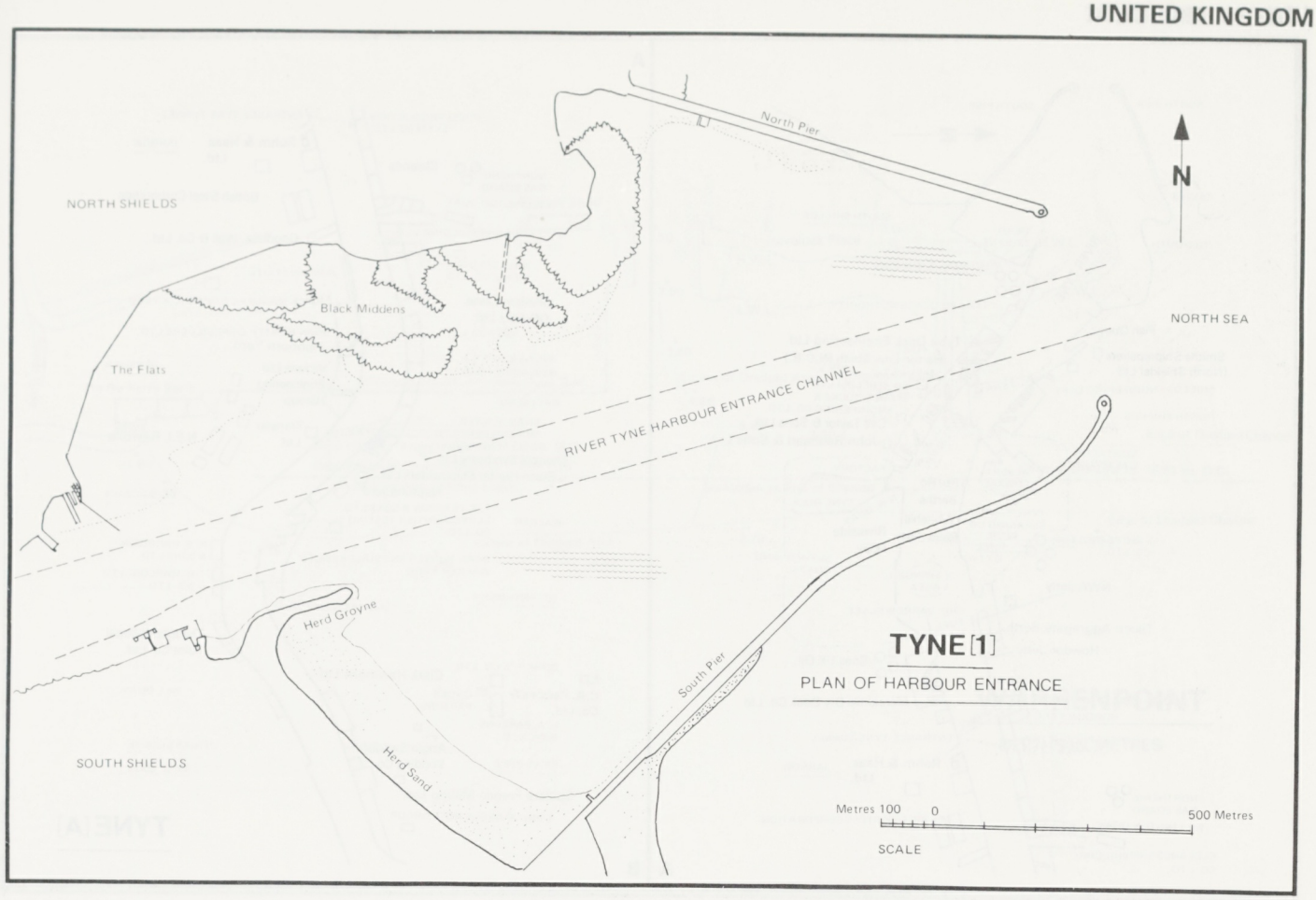
Dry Dock	Length ft	Length m	Width ft	Width m
No. 1	670	204	92	28
No. 2	560	170	75	22

Accommodation

Docks	Water area acres	Water area hectares	Normal depth of water in dock ft	in	m	Length of operational quays ft	m	Entrance lock Length ft	m	Width ft	m	Depth of water on sill at MHWN ft	in	m	at MHWS ft	in	m
Queen's	224	90	35	0	10.6	37022	1128	875	266	90	27	33	1	9.9	40	6	12.3
King's			33	0	9.9												
Prince of Wales			24	6	7.9												

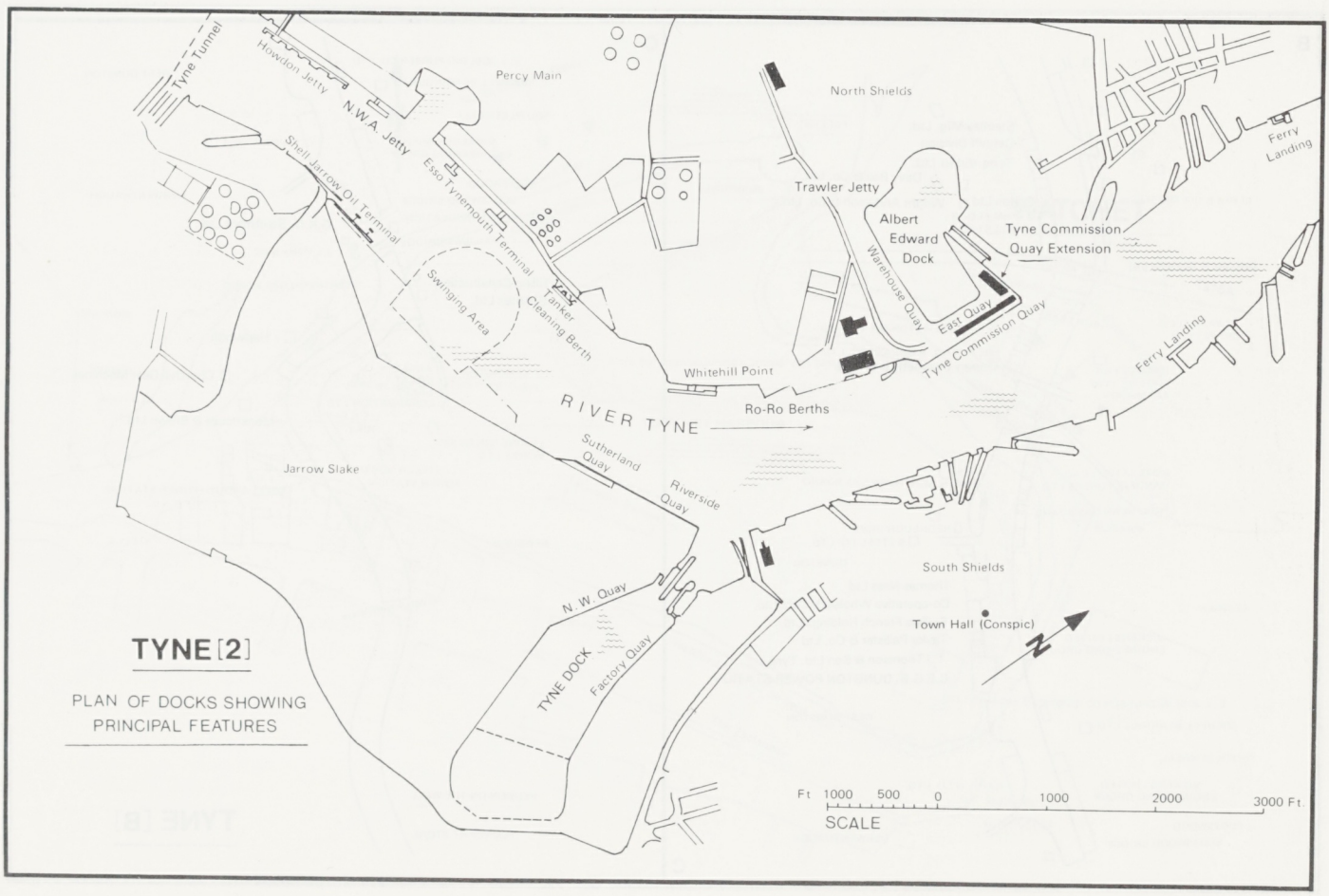

TEES (1)
Laying pipelines offshore
Seaton Channel no longer maintained
I. C. I. Docks
Smiths Docks
South Bank Wharves
Dredged to 5.7 m
Monsanto
Tees Storage
Seal Sands
Tarmac
Arthur Taylor Jetty
Tees Port Oil Berths
West Byng
Queen Elizabeth II
Phillips Inset Dock
Riverside
Tar Residuals
North Gare
No.1 Quay
Steel Terminal
Tees Dock
No.2 Quay
Ro-Ro
Bells Container Terminal
Dredged to 10.4 m
Shell Crude Oil Terminal
Tees Bulk Handling Ltd. (Potash)
Redcar Ore Terminal
Dredged to 14.1 m
South Gare Lt. Ho.


TEES (2)
Haverton Shipyard
I. C. I.
Billingham Reach
Billingham Oil
Newport Bridge
Dredged to 4.5 m
Bamlets
R. O. L. Limthorpe Dinsdale
Cleveland Offshore
Transporter Bridge
Dredged to 5.1 m
Middlesbrough Wharf
H. W. Riverside
T.H.P.A. Craft Depot
British Steel
Chemicals
Clarence Wharf
T.H.P.A. Middlesbrough Dock Closed
South Wharf & Tees Storage Co.
O.M.E. Tees Wharf
Cochranes Wharf and Tilcon
Deep Water Wharf
Normandy Wharf
Dredged to 5.7 m
Cargo Fleet
Smiths Dock
SOUTH BANK



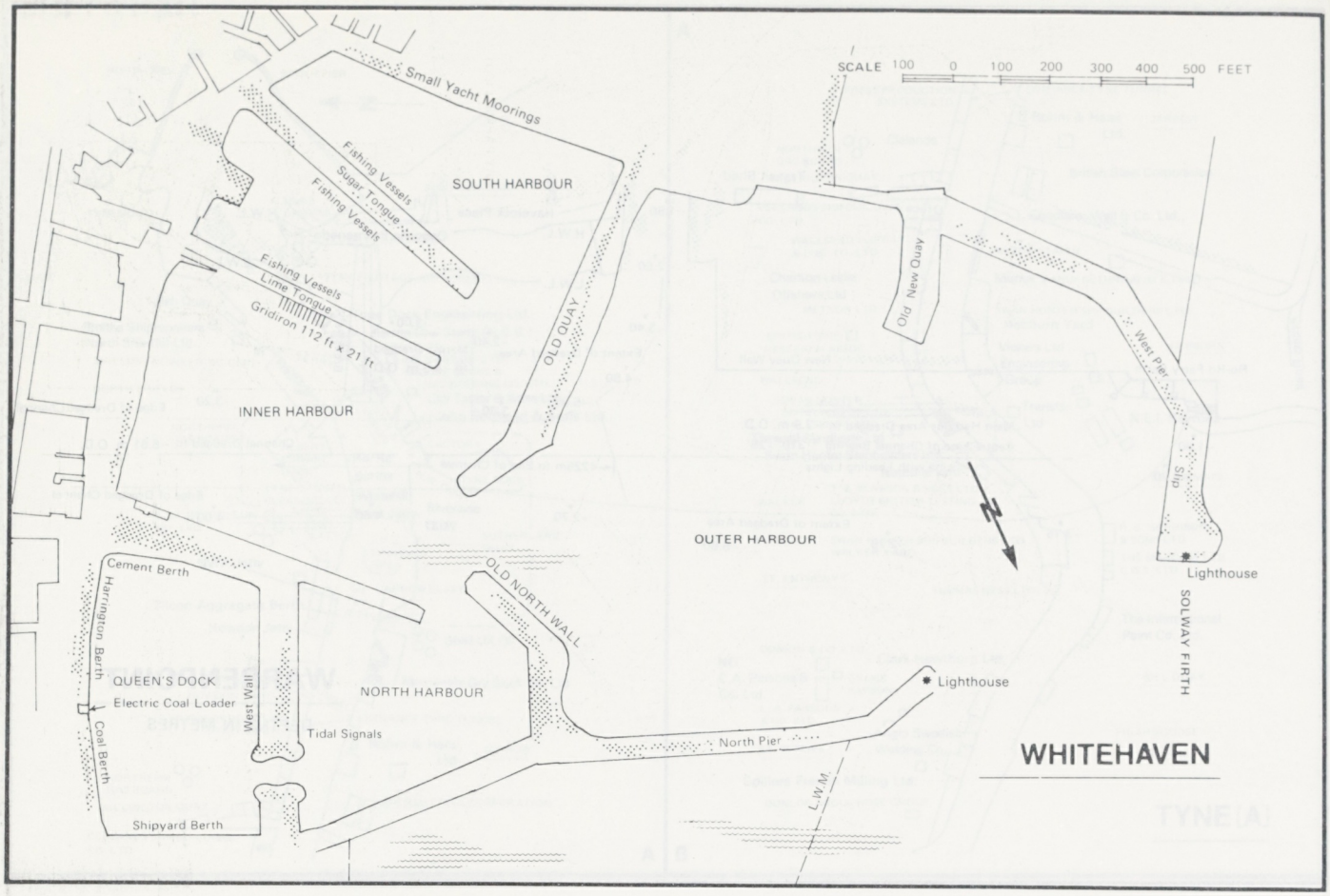
TYNE [1]

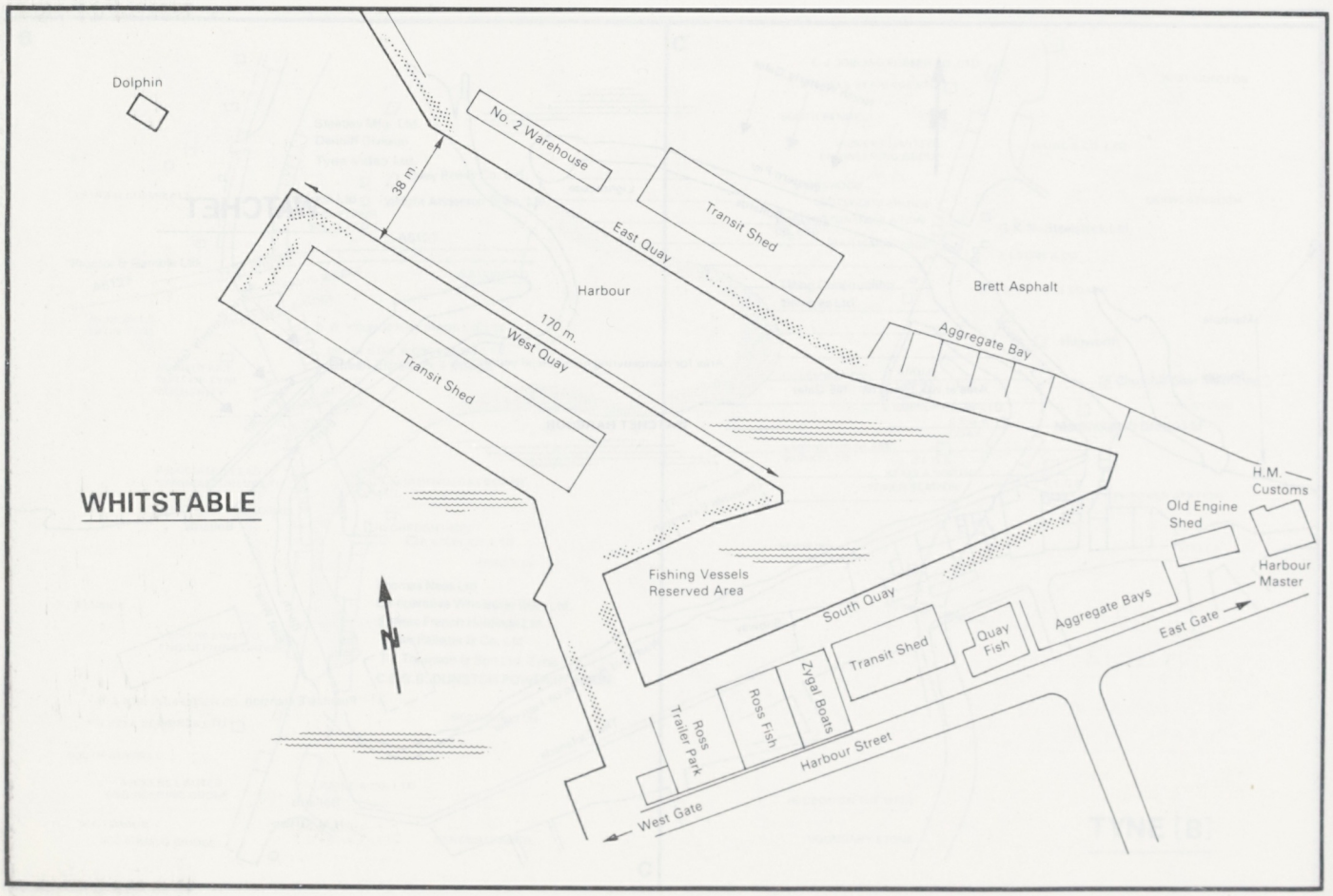
PLAN OF HARBOUR ENTRANCE

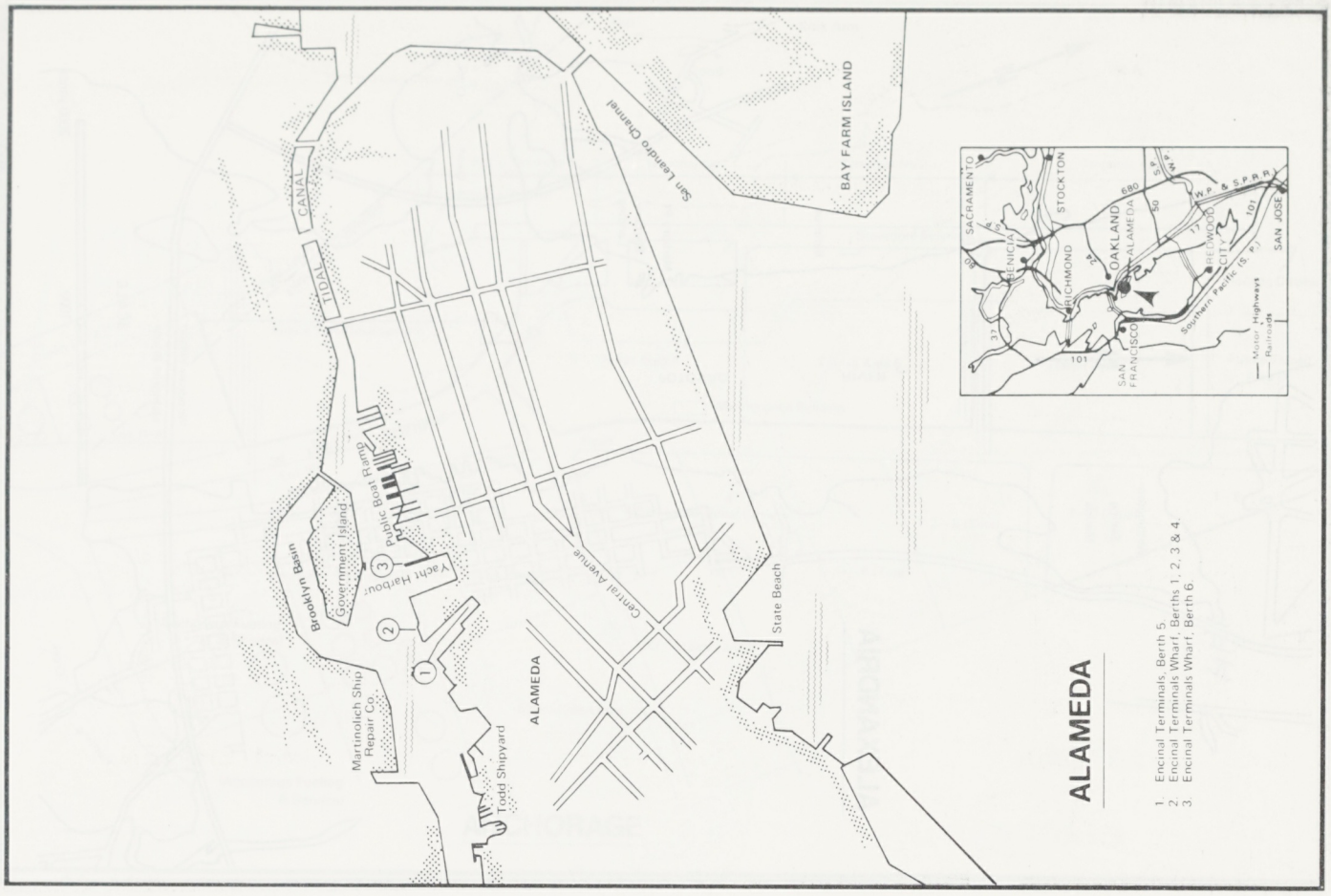


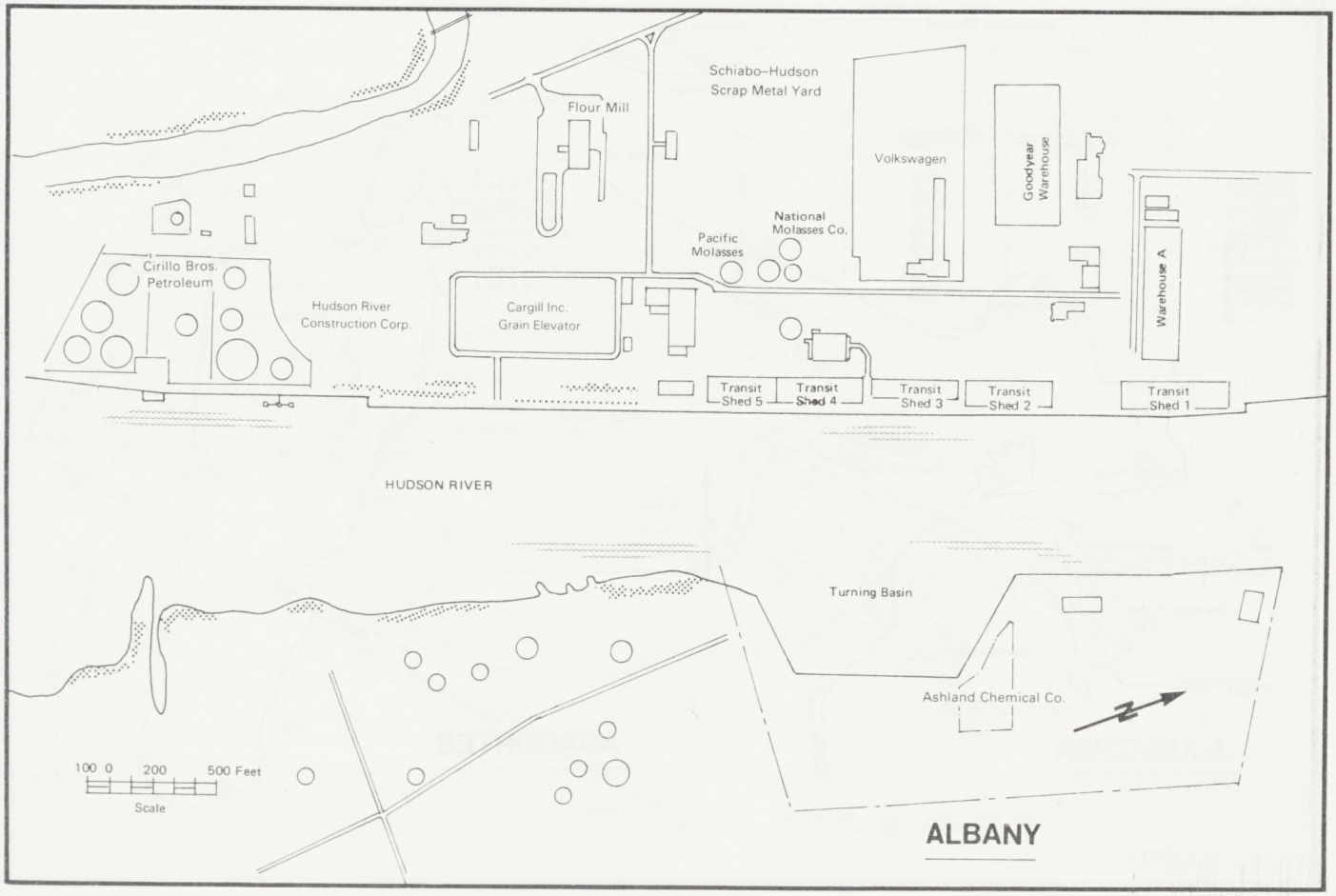
TYNE [2]

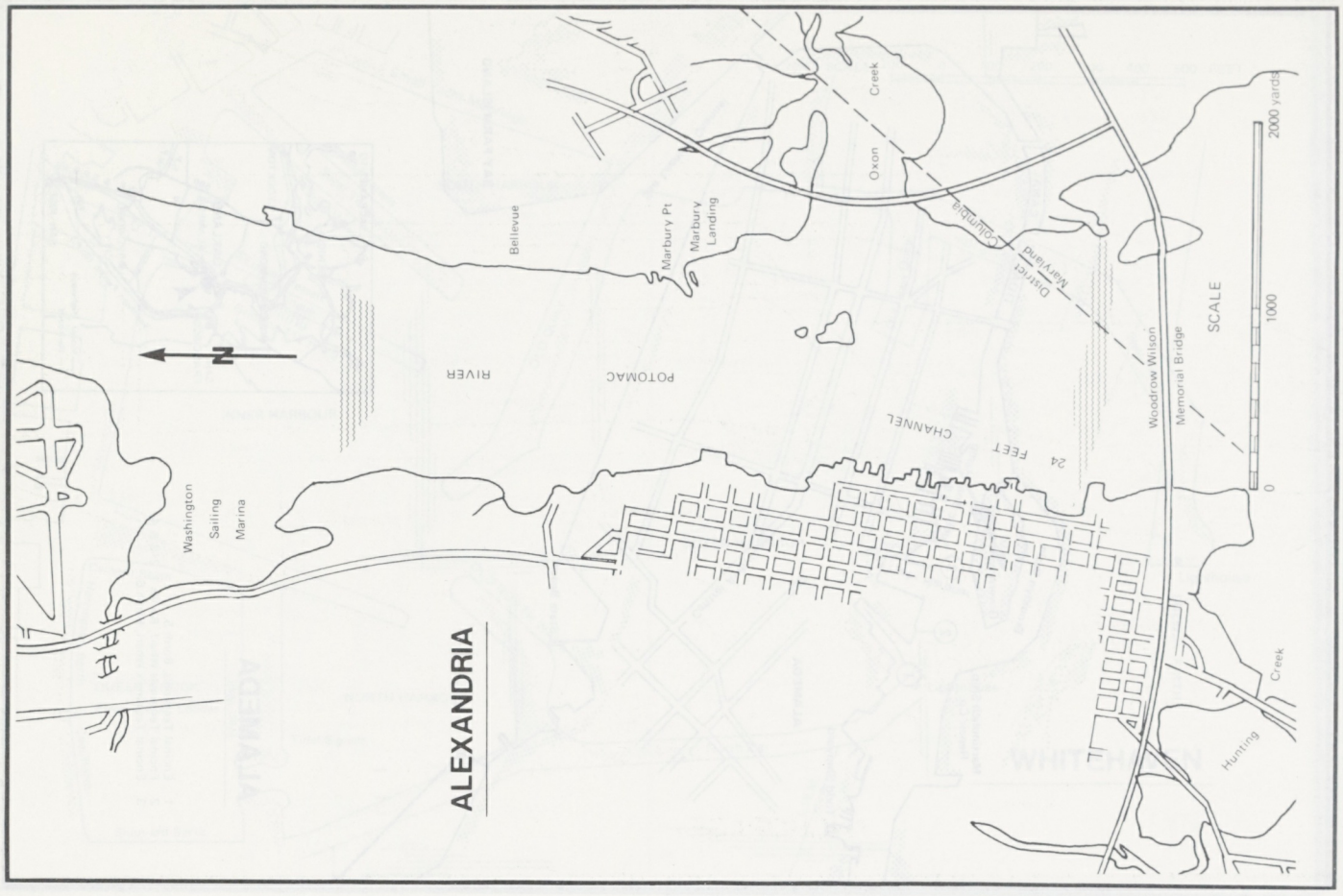
PLAN OF DOCKS SHOWING PRINCIPAL FEATURES

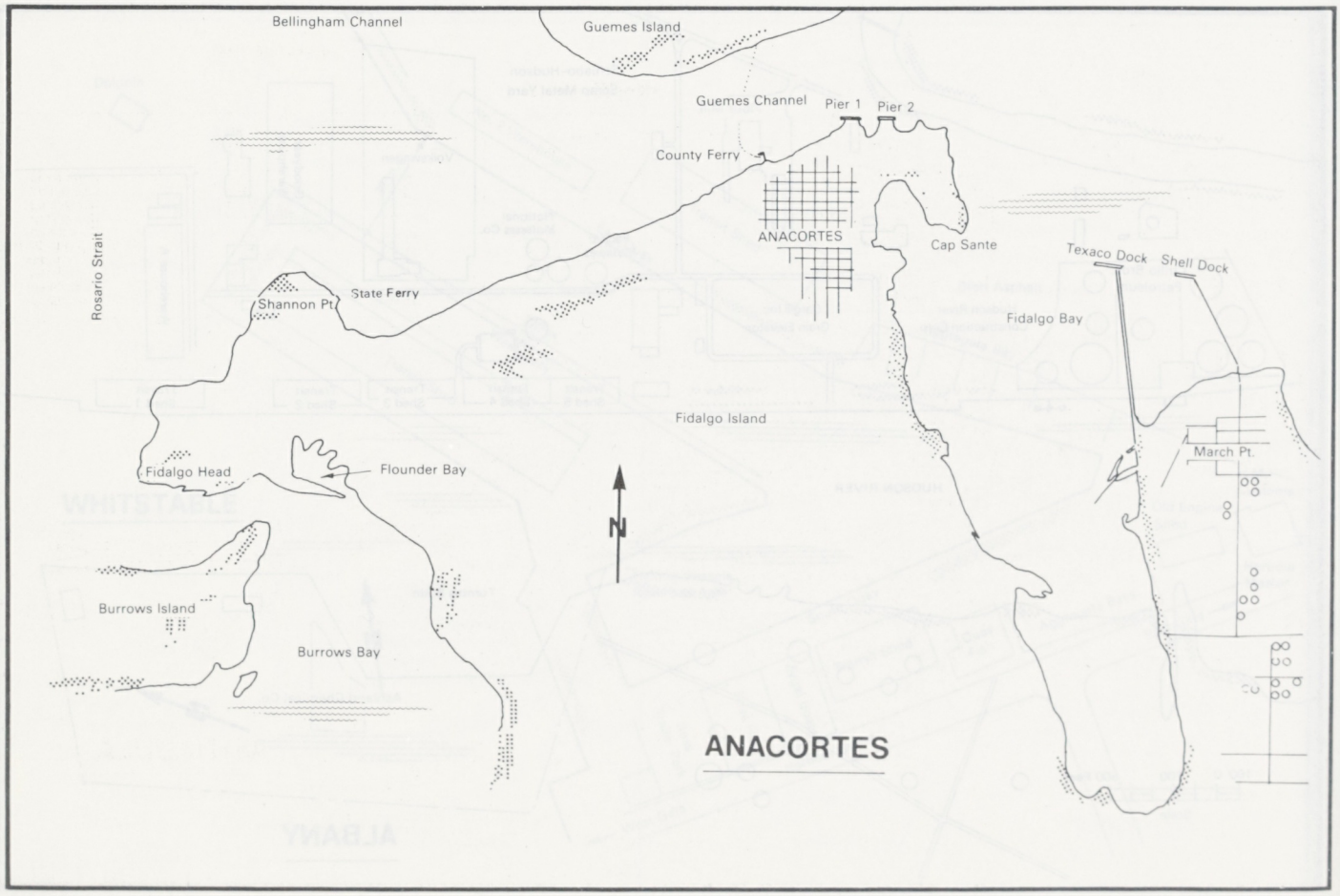

SCALE 100 0 100 200 300 400 500 FEET
Small Yacht Moorings
SOUTH HARBOUR
Fishing Vessels
Sugar Tongue
Fishing Vessels
Fishing Vessels
Lime Tongue
Gridiron 112 ft x 21 ft
INNER HARBOUR
OLD QUAY
Old New Quay
West Pier
Slip
OUTER HARBOUR
Lighthouse
SOLWAY FIRTH
Cement Berth
Harrington Berth
QUEEN'S DOCK
Electric Coal Loader
Coal Berth
West Wall
NORTH HARBOUR
Tidal Signals
OLD NORTH WALL
North Pier
Lighthouse
L.W.M.
Shipyard Berth
WHITEHAVEN

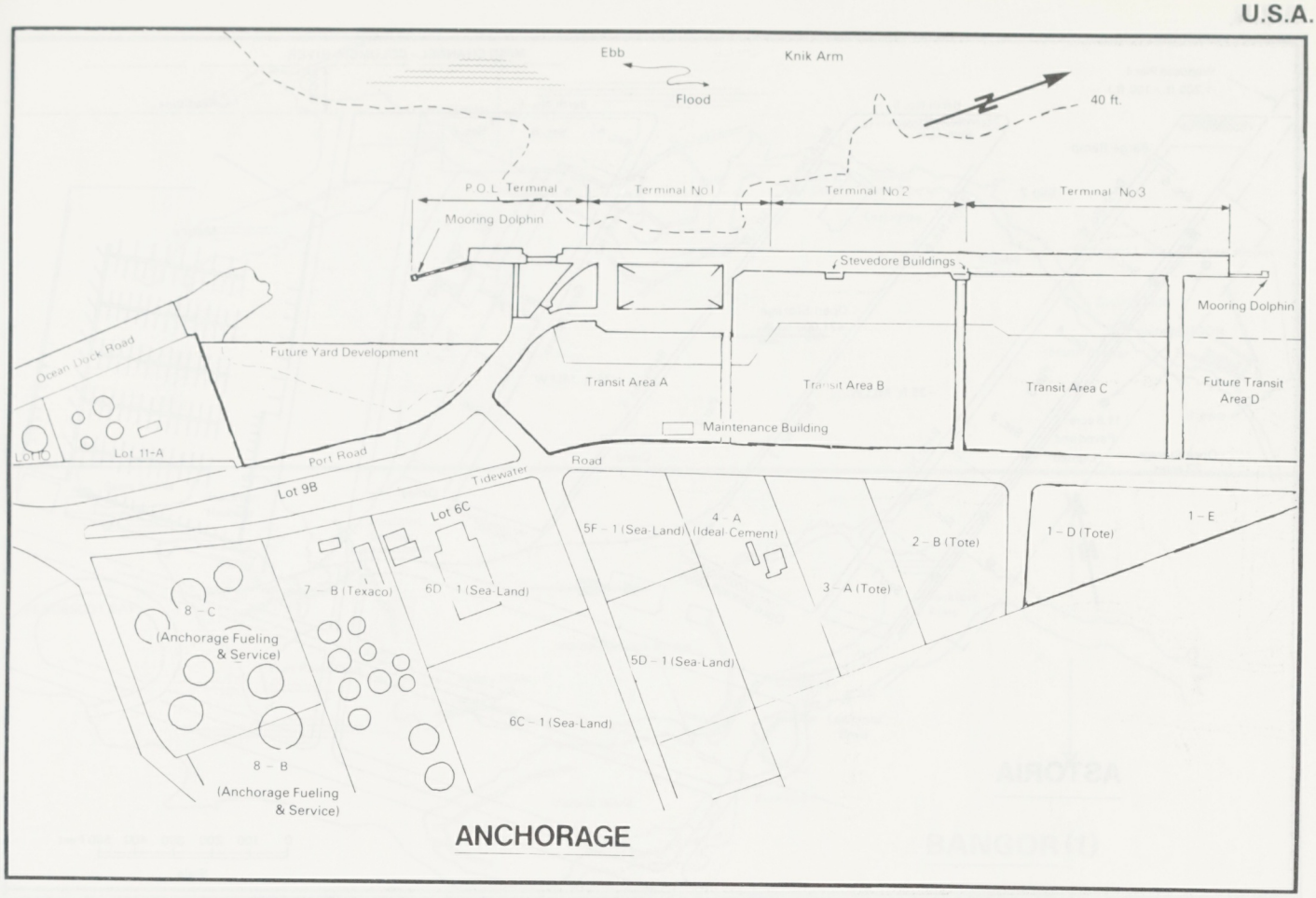

Dolphin
No. 2 Warehouse
38 m.
East Quay
Transit Shed
Harbour
Brett Asphalt
170 m.
West Quay
Transit Shed
Aggregate Bay
H.M. Customs
Old Engine Shed
Harbour Master
WHITSTABLE
Fishing Vessels Reserved Area
South Quay
Transit Shed
Quay Fish
Aggregate Bays
East Gate
Zygal Boats
Ross Fish
Ross Trailer Park
Harbour Street
West Gate


BAY FARM ISLAND
San Leandro Channel
CANAL
TIDAL
Public Boat Ramp
Yacht Harbour
Government Island
Brooklyn Basin
Martinolich Ship Repair Co.
Todd Shipyard
ALAMEDA
Central Avenue
State Beach
SACRAMENTO
STOCKTON
OAKLAND
ALAMEDA
RICHMOND
BENICIA
HAYWARD
REDWOOD CITY
SAN JOSE
SAN FRANCISCO
Southern Pacific (S.P.)
W.P. & S.P.R.R.
Motor Highways
Railroads
ALAMEDA
1. Encinal Terminals, Berth 5.
2. Encinal Terminals Wharf, Berths 1, 2, 3 & 4
3. Encinal Terminals Wharf, Berth 6

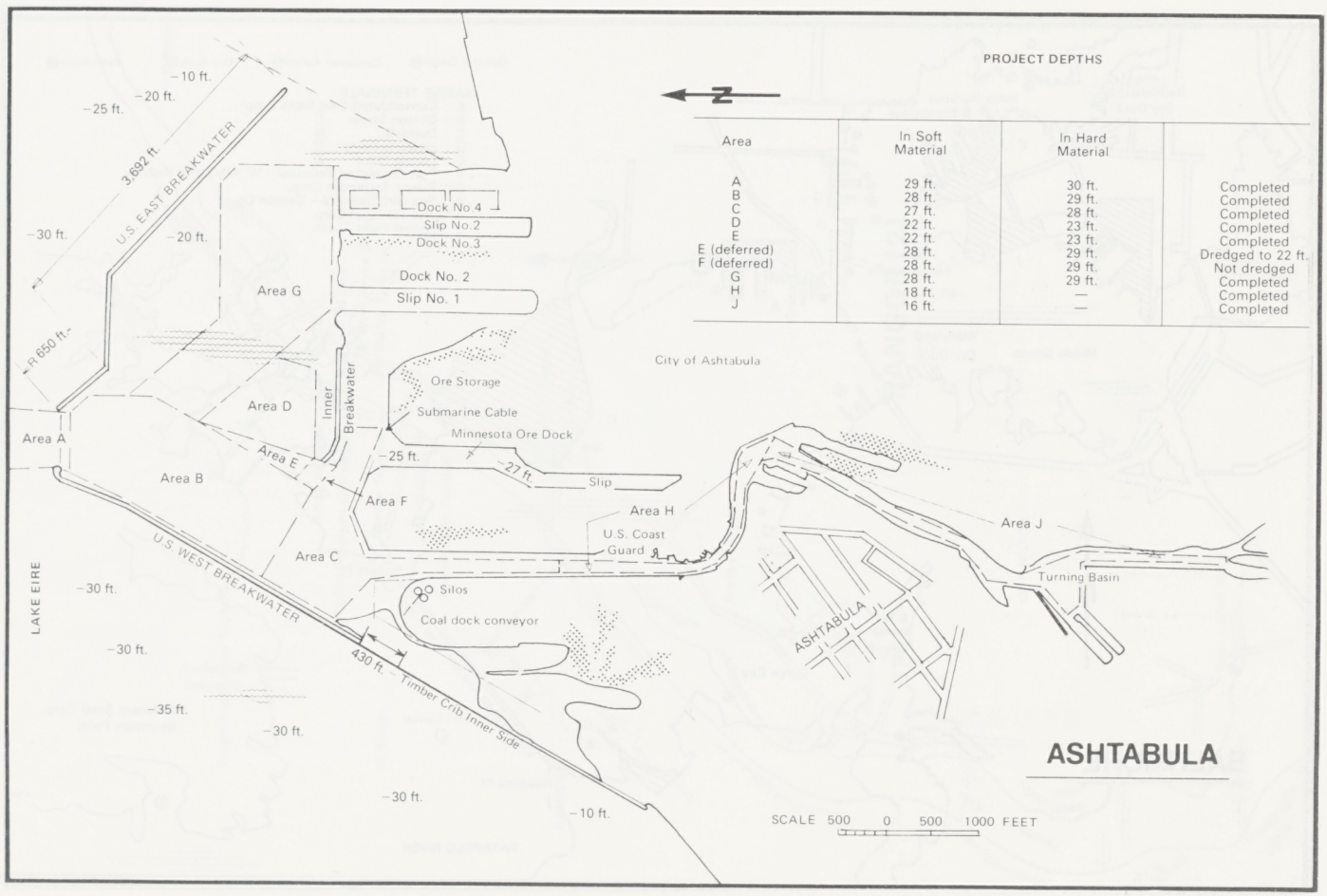

Schiabo–Hudson
Scrap Metal Yard
Flour Mill
Volkswagen
Goodyear Warehouse
National Molasses Co.
Pacific Molasses
Cirillo Bros. Petroleum
Hudson River Construction Corp.
Cargill Inc. Grain Elevator
Warehouse A
Transit Shed 5
Transit Shed 4
Transit Shed 3
Transit Shed 2
Transit Shed 1
HUDSON RIVER
Turning Basin
Ashland Chemical Co.
100 0 200 500 Feet
Scale
ALBANY


Bellevue
Marbury Pt
Marbury Landing
Oxon Creek
District of Columbia
Maryland
Woodrow Wilson Memorial Bridge
SCALE
2000 yards
1000
0
POTOMAC RIVER
24 FEET CHANNEL
N
Washington Sailing Marina
ALEXANDRIA
Hunting Creek

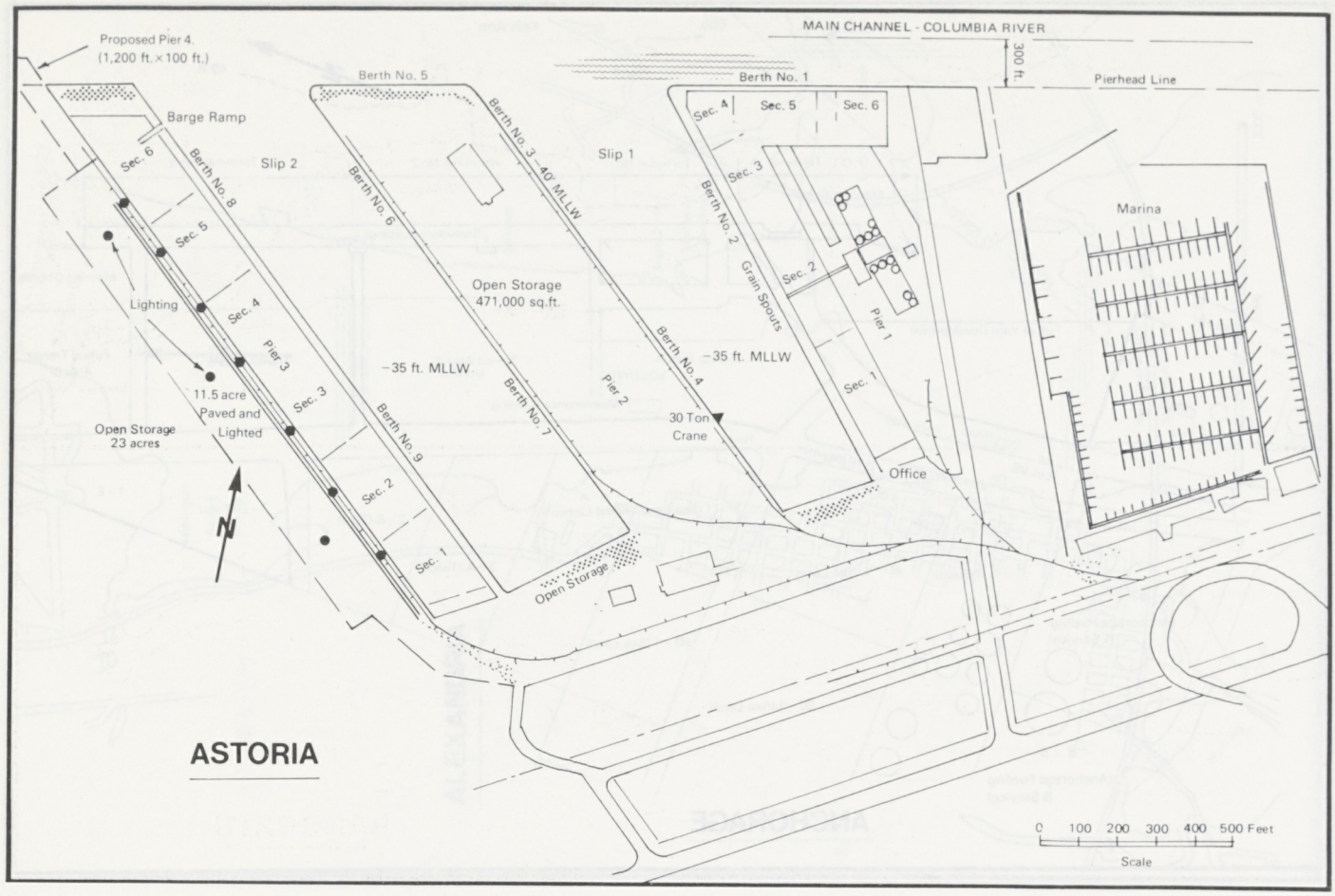

Bellingham Channel
Guemes Island
Guemes Channel
Pier 1
Pier 2
County Ferry
ANACORTES
Cap Sante
Texaco Dock
Shell Dock
Rosario Strait
Shannon Pt
State Ferry
Fidalgo Bay
Fidalgo Island
March Pt.
Fidalgo Head
Flounder Bay
N
Burrows Island
Burrows Bay
ANACORTES

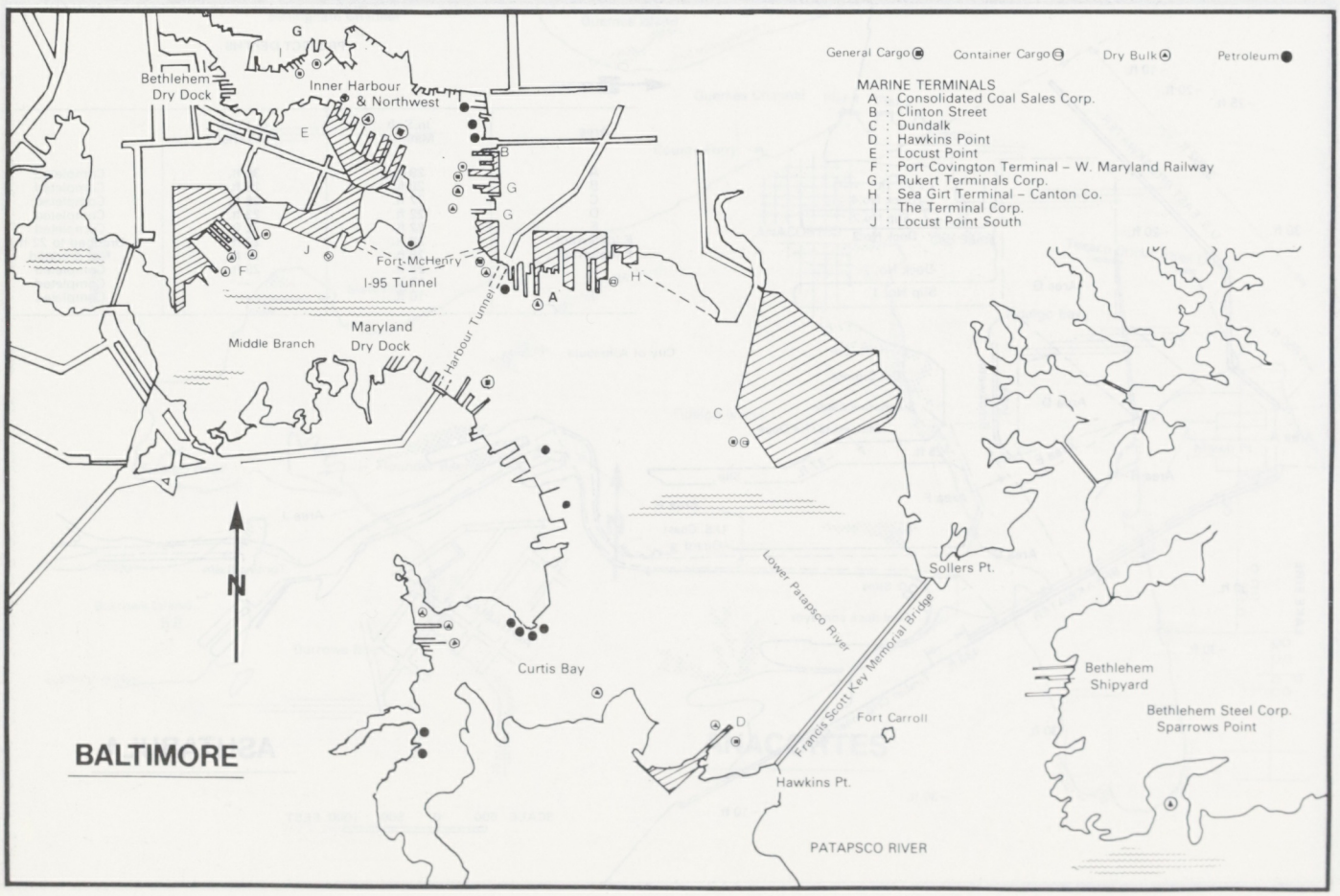


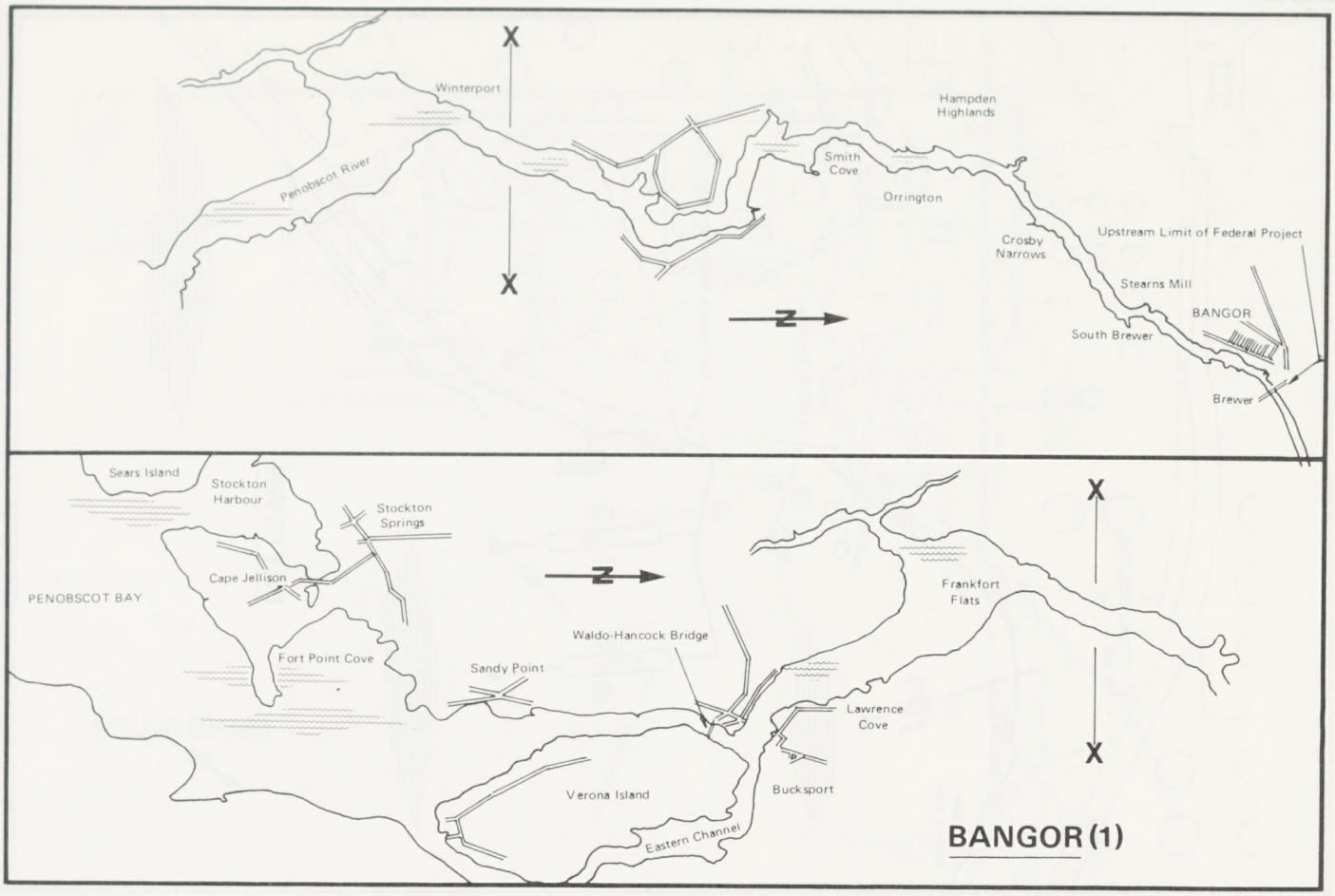
ANCHORAGE

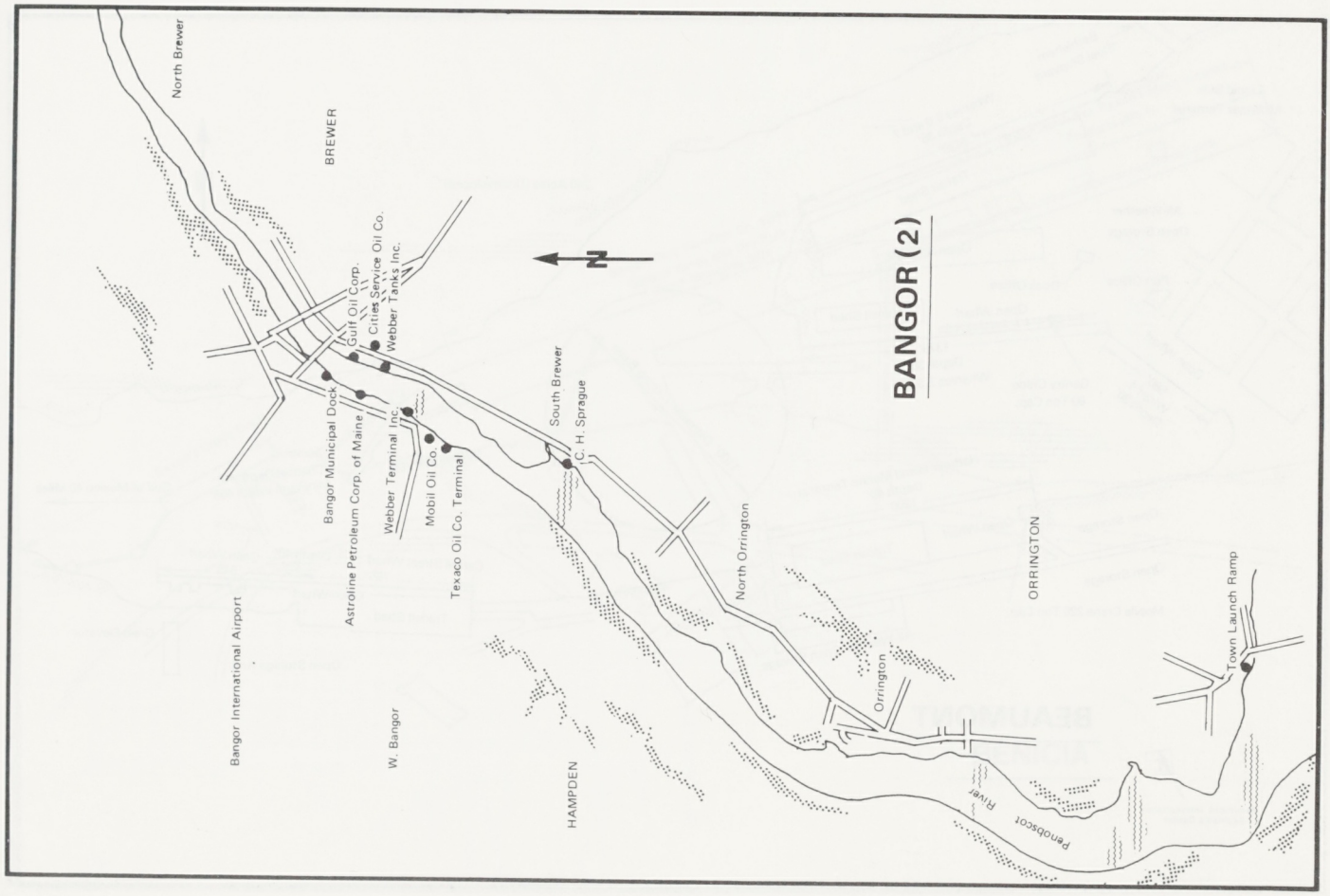


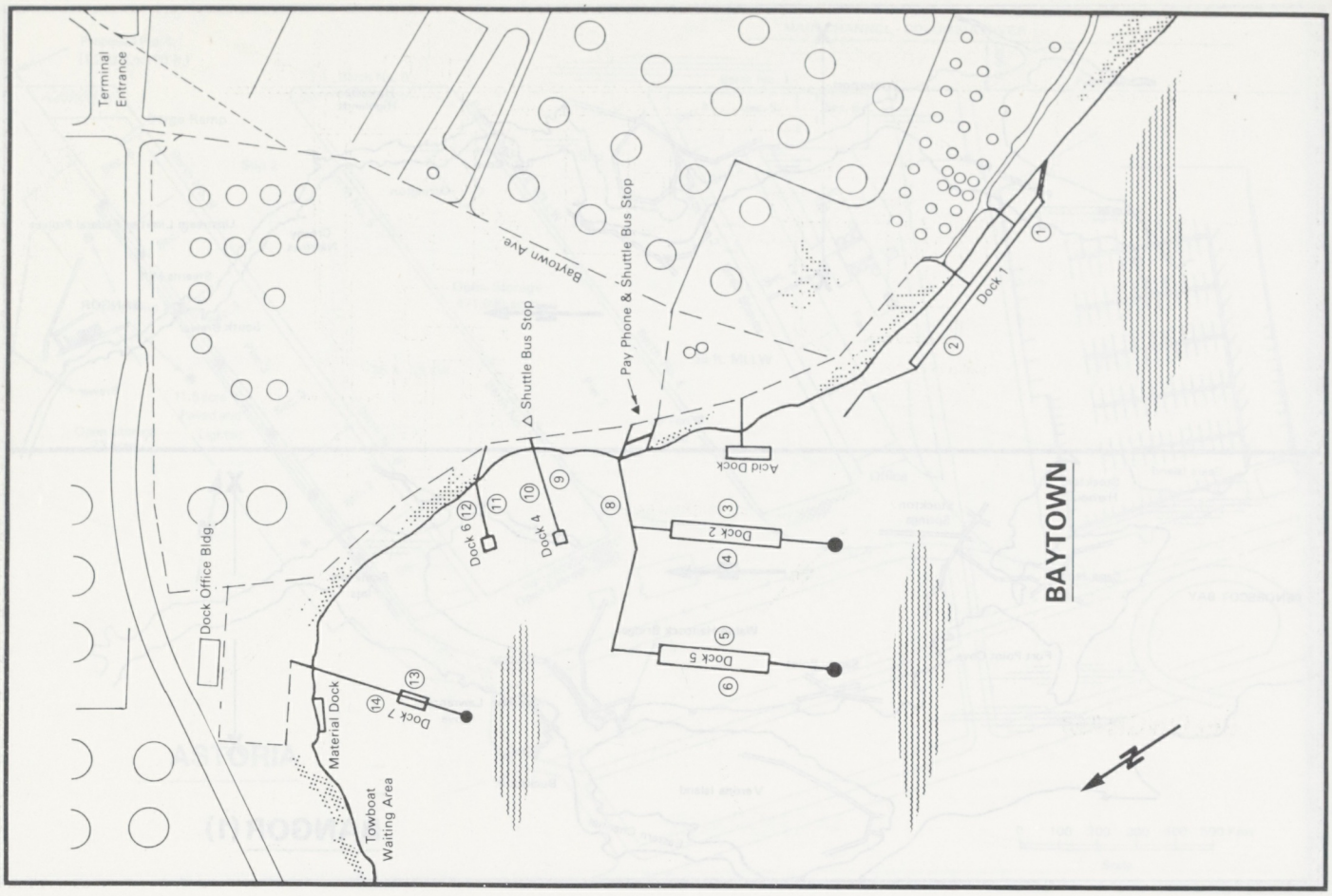
ASHTABULA

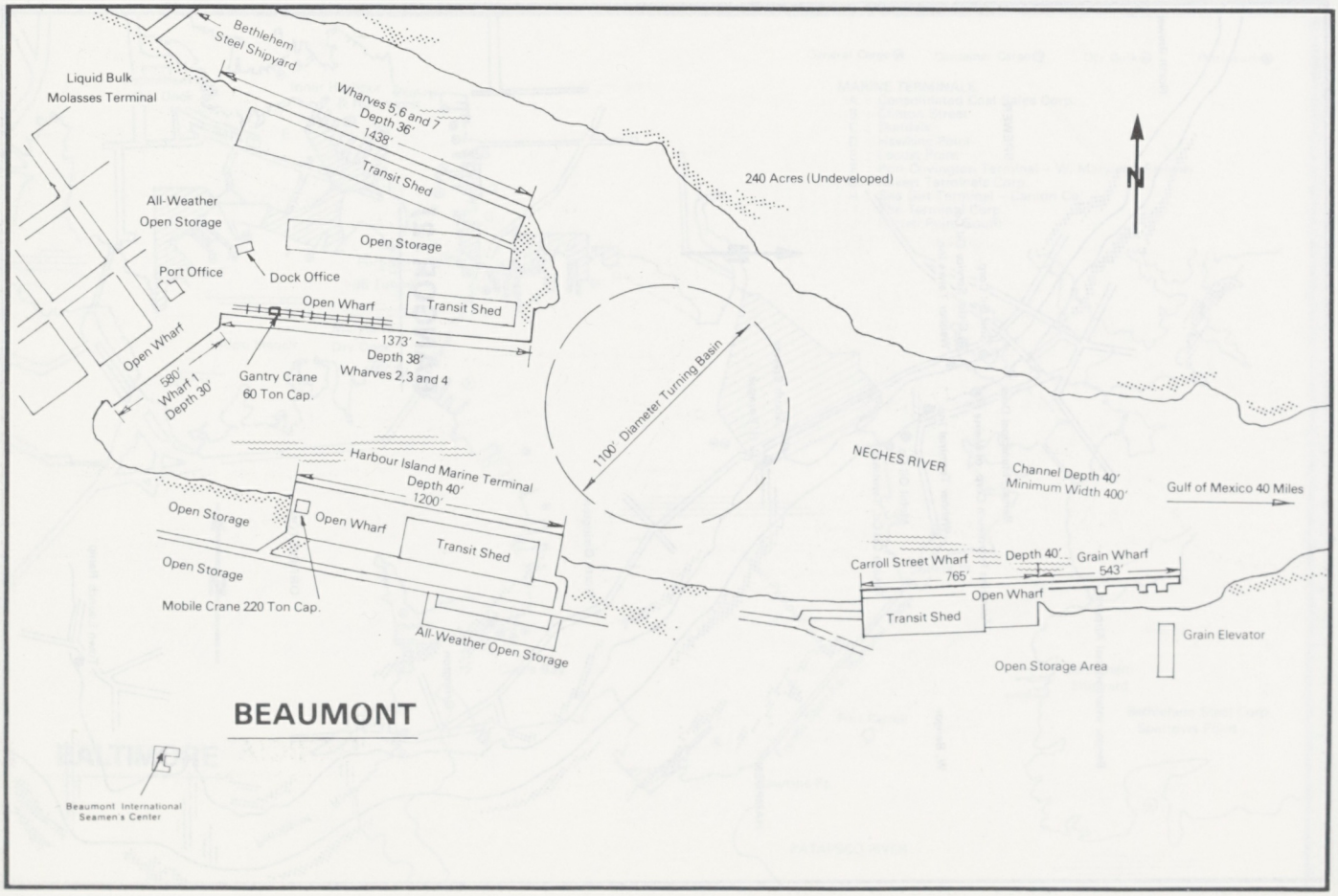

MAIN CHANNEL - COLUMBIA RIVER
300 ft.
Pierhead Line
Proposed Pier 4.
(1,200 ft. × 100 ft.)
Berth No. 5
Berth No. 1
Barge Ramp
Slip 2
Slip 1
Berth No. 8
Berth No. 6
Berth No. 3 -40' MLLW
Berth No. 2
Grain Spouts
Sec. 6
Sec. 5
Sec. 4
Sec. 3
Sec. 2
Sec. 1
Pier 3
Pier 2
Pier 1
Lighting
Open Storage
471,000 sq.ft.
-35 ft. MLLW
Berth No. 7
Berth No. 4
30 Ton
Crane
Marina
Office
11.5 acre
Paved and
Lighted
Open Storage
23 acres
Berth No. 9
Open Storage
N
ASTORIA
0 100 200 300 400 500 Feet
Scale

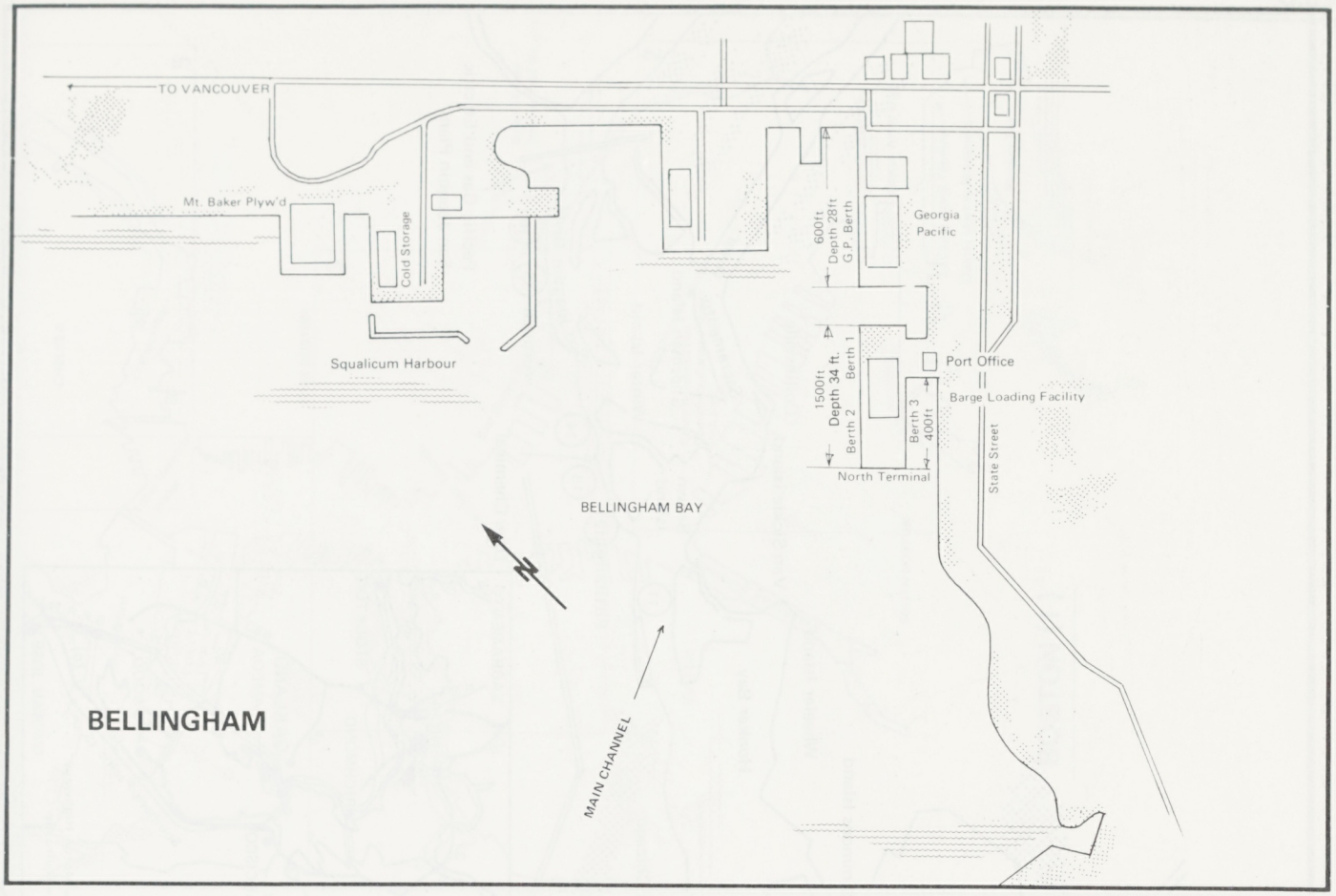

General Cargo
Container Cargo
Dry Bulk
Petroleum
MARINE TERMINALS
A : Consolidated Coal Sales Corp.
B : Clinton Street
C : Dundalk
D : Hawkins Point
E : Locust Point
F : Port Covington Terminal - W. Maryland Railway
G : Rukert Terminals Corp.
H : Sea Girt Terminal - Canton Co.
I : The Terminal Corp.
J : Locust Point South
Bethlehem
Dry Dock
Inner Harbour
& Northwest
Fort McHenry
I-95 Tunnel
Harbour Tunnels
Maryland
Dry Dock
Middle Branch
Sollers Pt.
Lower Patapsco River
Francis Scott Key Memorial Bridge
Curtis Bay
Bethlehem
Shipyard
Bethlehem Steel Corp.
Sparrows Point
Fort Carroll
Hawkins Pt.
PATAPSCO RIVER
N
BALTIMORE

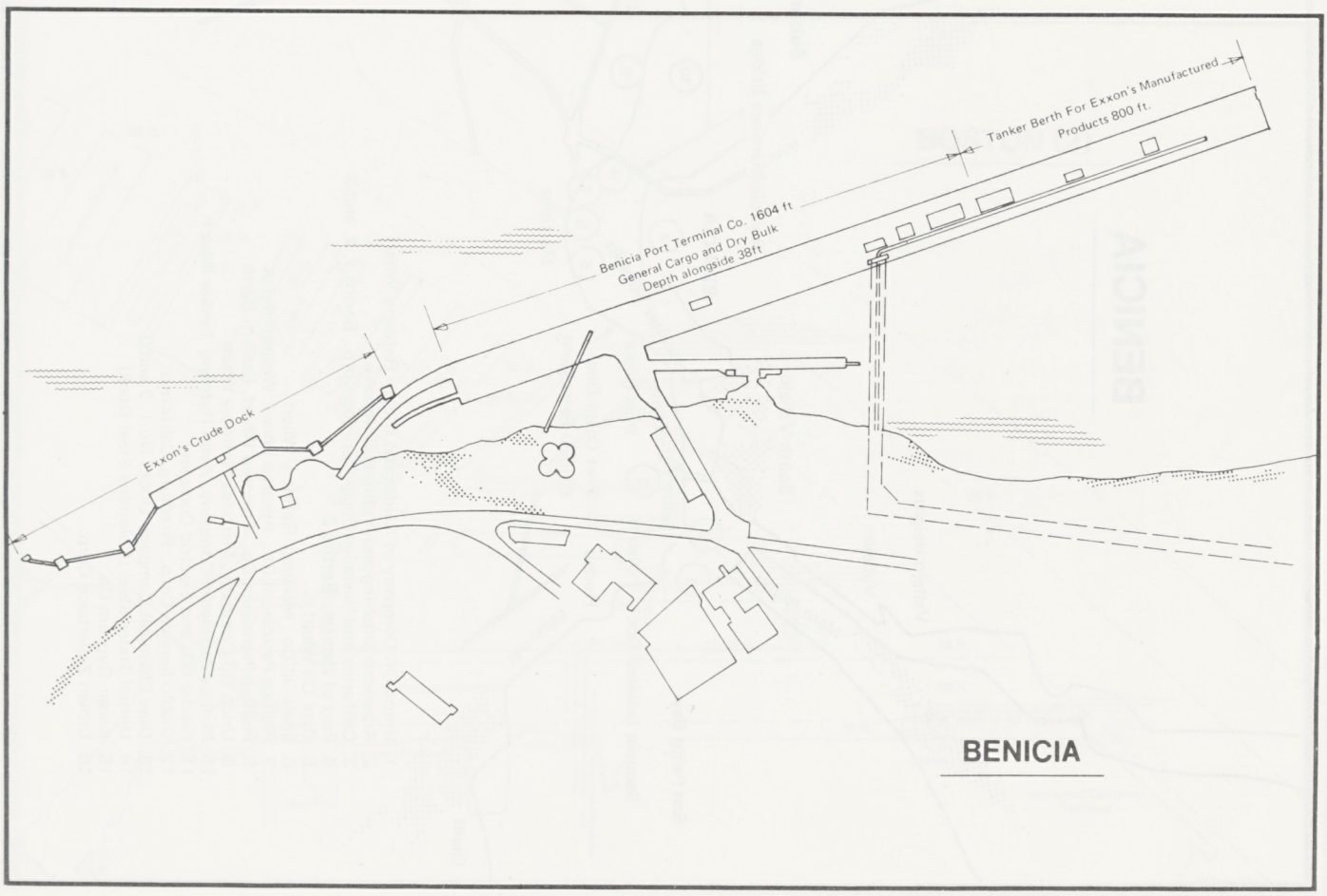

Winterport
Penobscot River
Hampden Highlands
Smith Cove
Orrington
Crosby Narrows
Upstream Limit of Federal Project
Stearns Mill
BANGOR
South Brewer
Brewer
Sears Island
Stockton Harbour
Stockton Springs
Cape Jellison
PENOBSCOT BAY
Fort Point Cove
Sandy Point
Waldo-Hancock Bridge
Frankfort Flats
Lawrence Cove
Verona Island
Bucksport
Eastern Channel
BANGOR (1)


North Brewer
BREWER
Gulf Oil Corp.
Cities Service Oil Co.
Webber Tanks Inc.
Bangor Municipal Dock
Astroline Petroleum Corp. of Maine
Webber Terminal Inc.
Mobil Oil Co.
Texaco Oil Co. Terminal
South Brewer
C. H. Sprague
BANGOR (2)
North Orrington
ORRINGTON
Orrington
Town Launch Ramp
Bangor International Airport
W. Bangor
HAMPDEN
Penobscot River

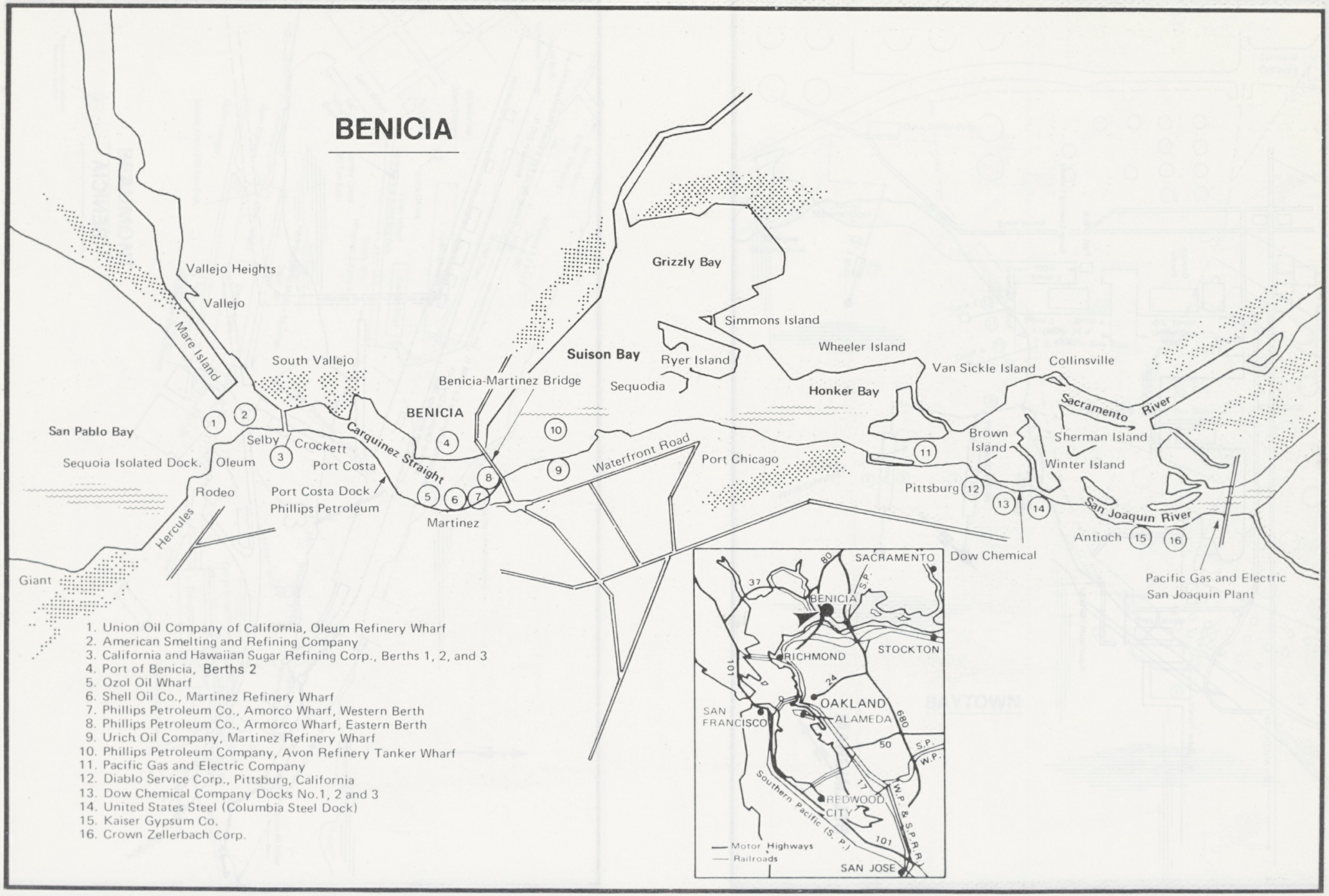

Terminal Entrance
Baytown Ave.
Pay Phone & Shuttle Bus Stop
Shuttle Bus Stop
Dock 1
Acid Dock
Dock 2
Dock 4
Dock 6
Dock 5
Dock 7
Dock Office Bldg.
Material Dock
Towboat Waiting Area
BAYTOWN
N


Bethlehem Steel Shipyard
Liquid Bulk Molasses Terminal
Wharves 5, 6 and 7
Depth 36'
1438'
Transit Shed
All-Weather Open Storage
Open Storage
Port Office
Dock Office
Open Wharf
Transit Shed
1373'
Depth 38'
Wharves 2, 3 and 4
Open Wharf
580'
Wharf 1
Depth 30'
Gantry Crane
60 Ton Cap.
240 Acres (Undeveloped)
N
1100' Diameter Turning Basin
NECHES RIVER
Channel Depth 40'
Minimum Width 400'
Gulf of Mexico 40 Miles
Harbour Island Marine Terminal
Depth 40'
1200'
Open Storage
Open Wharf
Transit Shed
Open Storage
Mobile Crane 220 Ton Cap.
All-Weather Open Storage
Carroll Street Wharf
765'
Depth 40'
Grain Wharf
543'
Open Wharf
Transit Shed
Grain Elevator
Open Storage Area
BEAUMONT
Beaumont International Seamen's Center

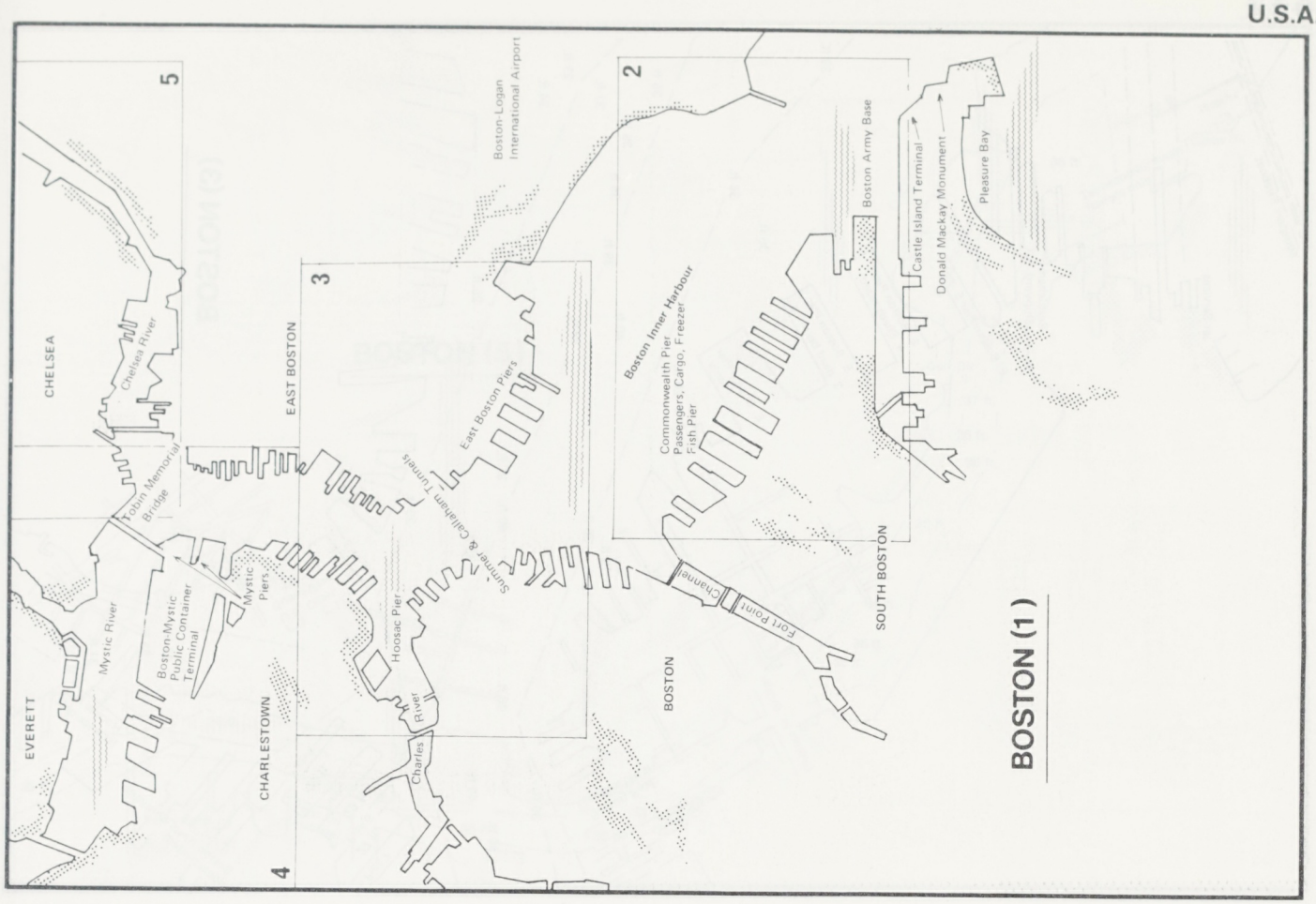

TO VANCOUVER
Mt. Baker Plyw'd
Cold Storage
Squalicum Harbour
600ft
Depth 28ft
G.P. Berth
Georgia
Pacific
1500ft
Depth 34 ft.
Berth 1
Berth 2
Berth 3
400ft
North Terminal
Port Office
Barge Loading Facility
State Street
BELLINGHAM BAY
MAIN CHANNEL
BELLINGHAM

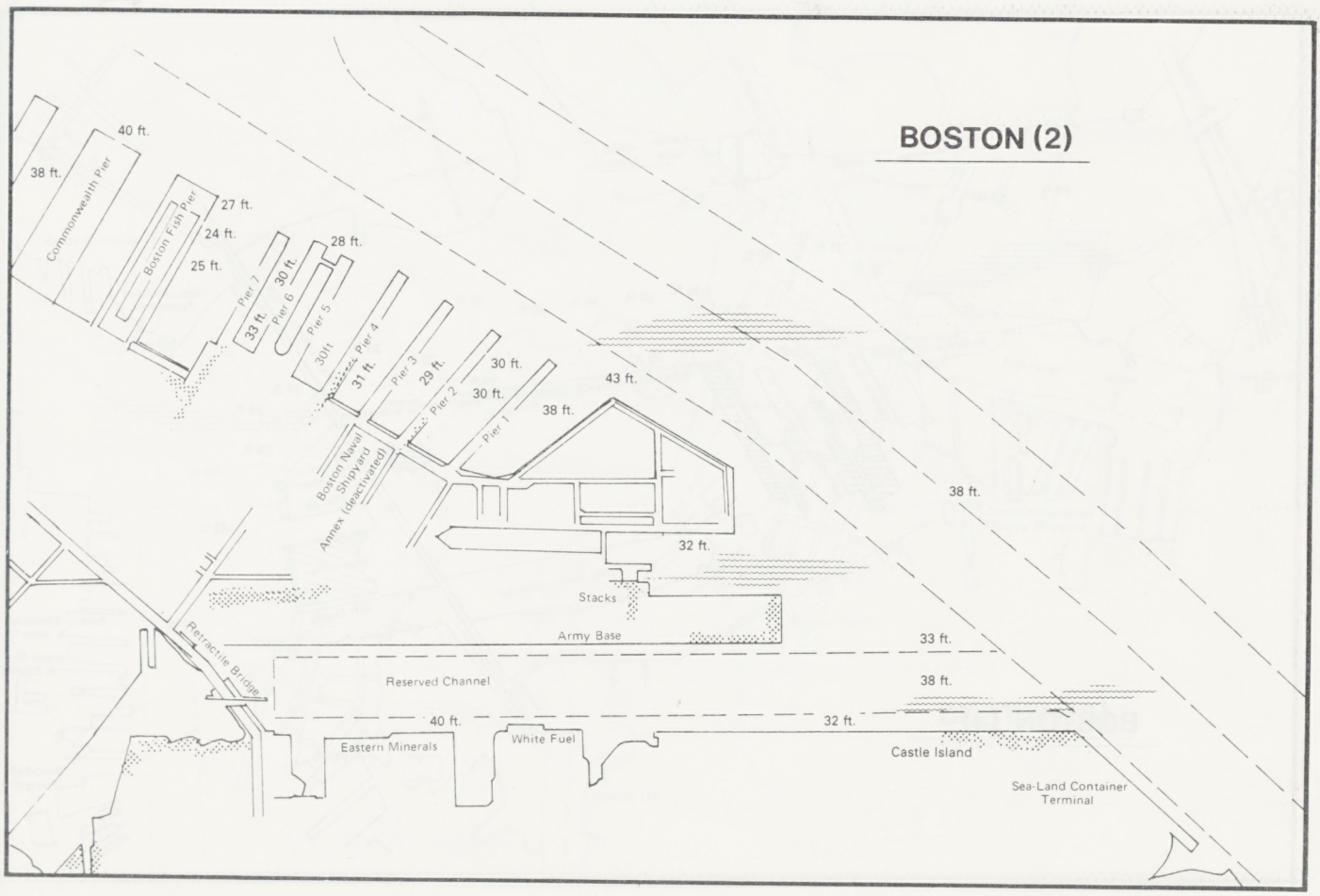

Tanker Berth For Exxon's Manufactured
Products 800 ft.
Benicia Port Terminal Co. 1604 ft
General Cargo and Dry Bulk
Depth alongside 38ft
Exxon's Crude Dock
BENICIA

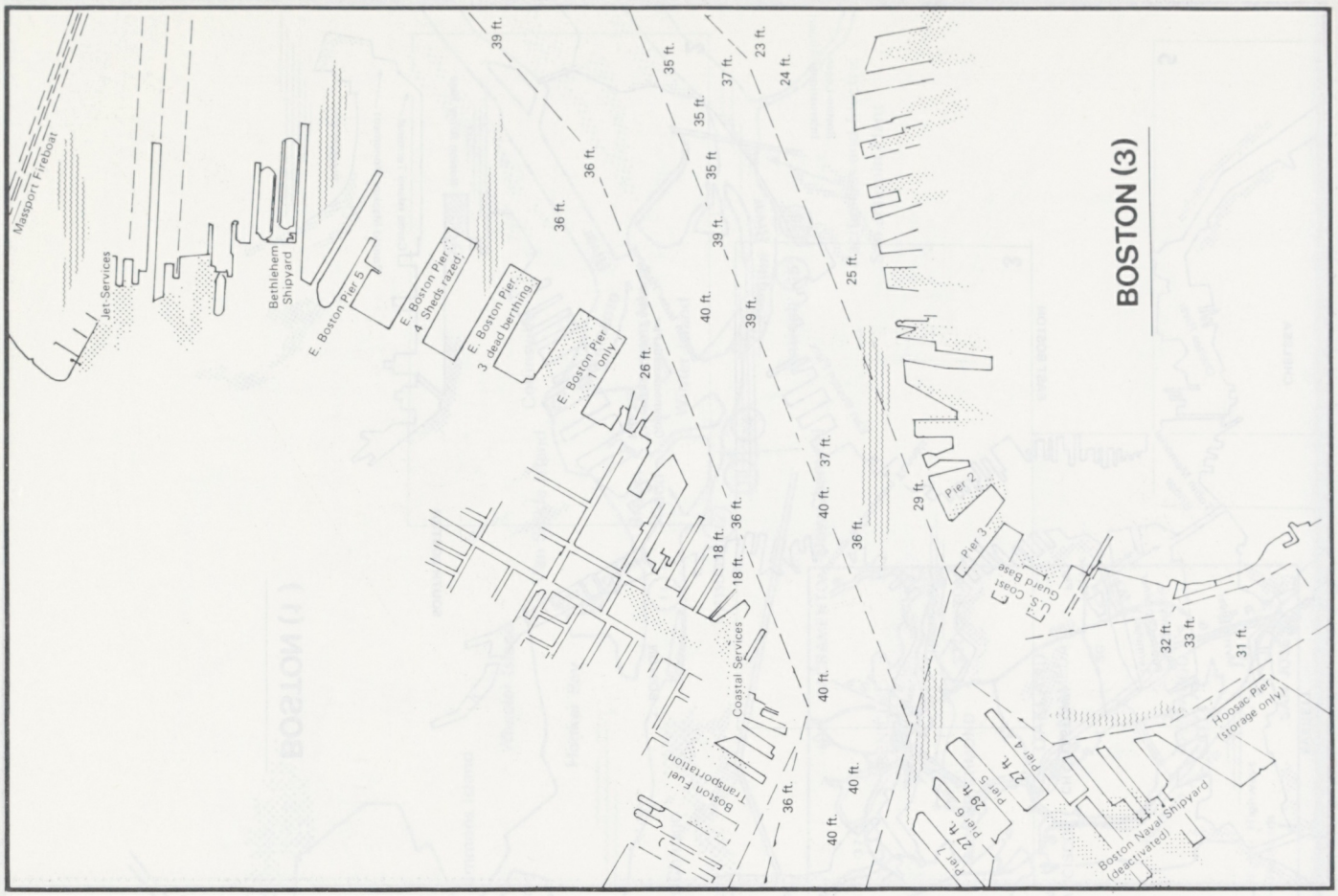
BENICIA

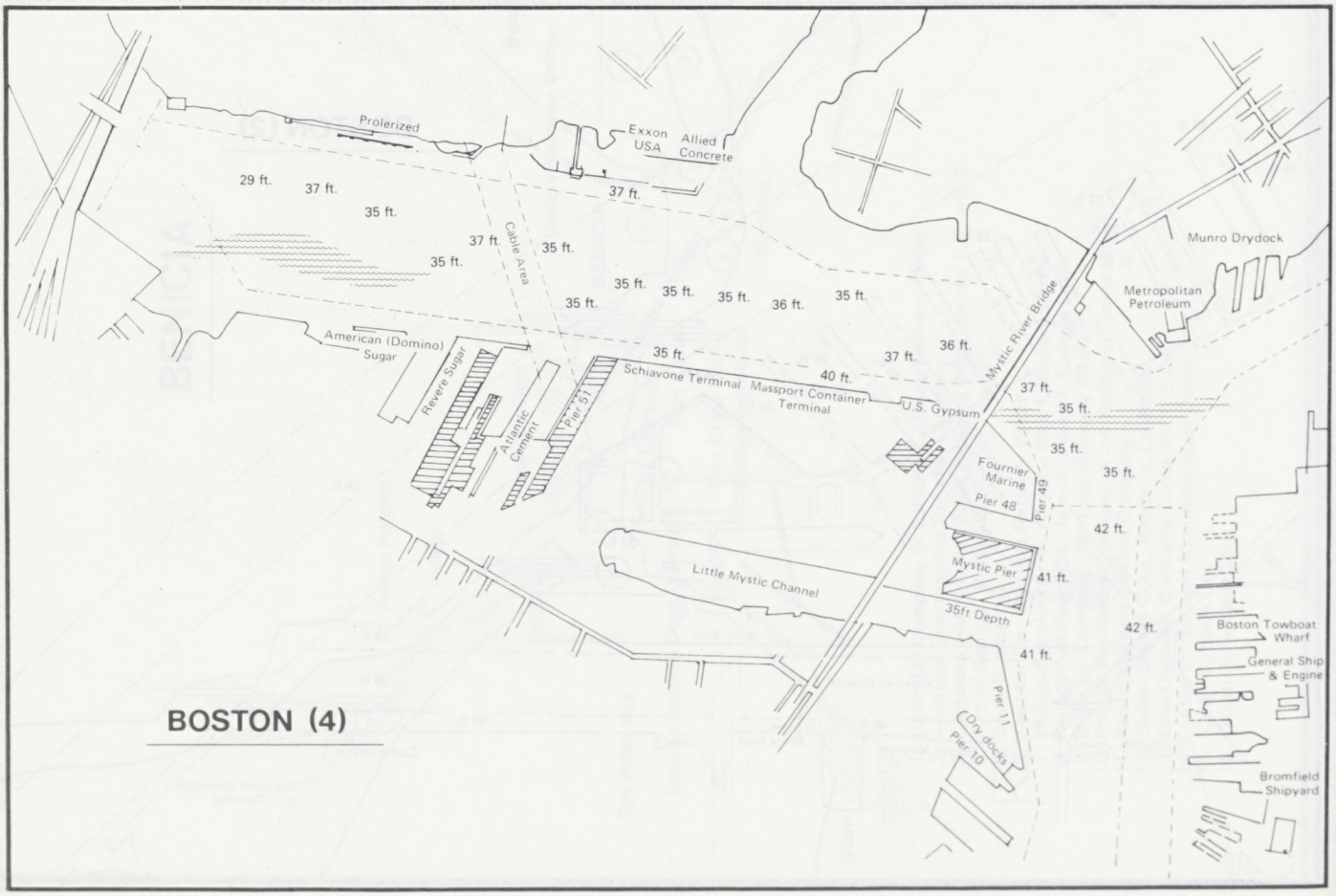


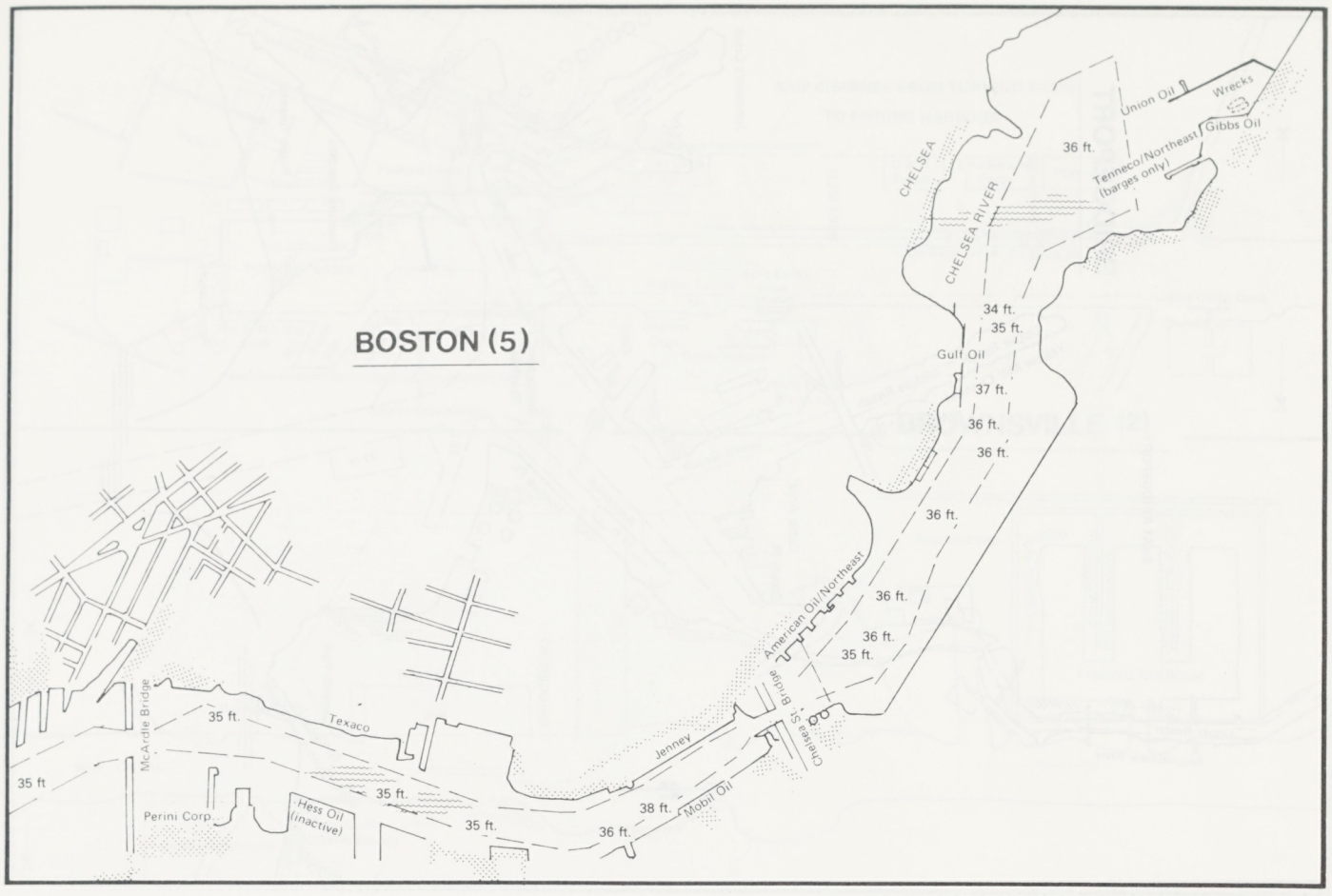
1. Union Oil Company of California, Oleum Refinery Wharf
2. American Smelting and Refining Company
3. California and Hawaiian Sugar Refining Corp., Berths 1, 2, and 3
4. Port of Benicia, Berths 2
5. Ozol Oil Wharf
6. Shell Oil Co., Martinez Refinery Wharf
7. Phillips Petroleum Co., Amorco Wharf, Western Berth
8. Phillips Petroleum Co., Armorco Wharf, Eastern Berth
9. Urich Oil Company, Martinez Refinery Wharf
10. Phillips Petroleum Company, Avon Refinery Tanker Wharf
11. Pacific Gas and Electric Company
12. Diablo Service Corp., Pittsburg, California
13. Dow Chemical Company Docks No.1, 2 and 3
14. United States Steel (Columbia Steel Dock)
15. Kaiser Gypsum Co.
16. Crown Zellerbach Corp.

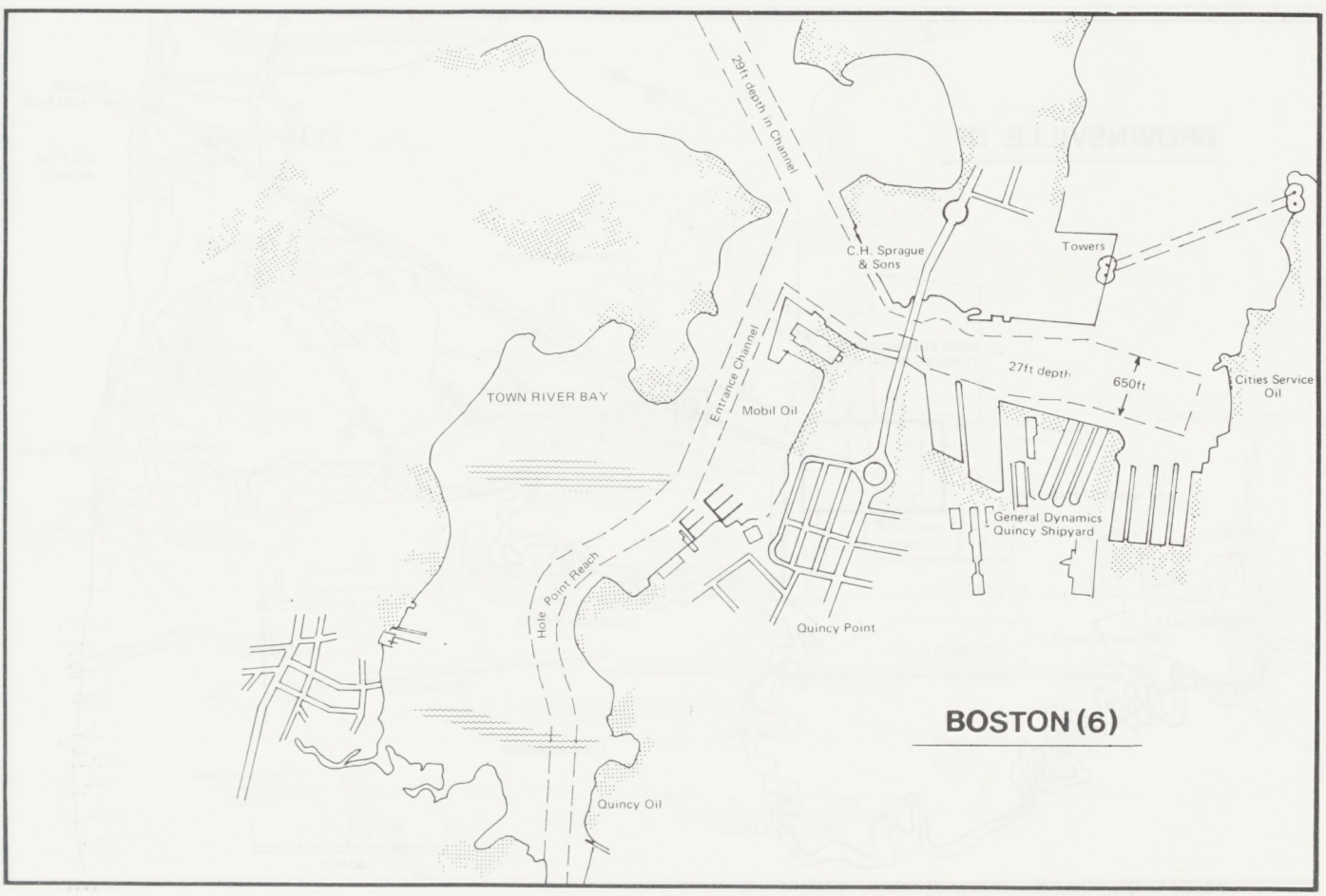

BOSTON (1)
CHELSEA
EAST BOSTON
CHARLESTOWN
EVERETT
SOUTH BOSTON
BOSTON
Chelsea River
Tobin Memorial Bridge
Mystic River
Boston-Mystic Public Container Terminal
Mystic Piers
Hoosac Pier
Charles River
Sumner & Callahan Tunnels
East Boston Piers
Boston-Logan International Airport
Boston Inner Harbour
Commonwealth Pier Passengers; Cargo, Freezer
Fish Pier
Fort Point Channel
Boston Army Base
Castle Island Terminal
Donald Mackay Monument
Pleasure Bay
2
3
4
5

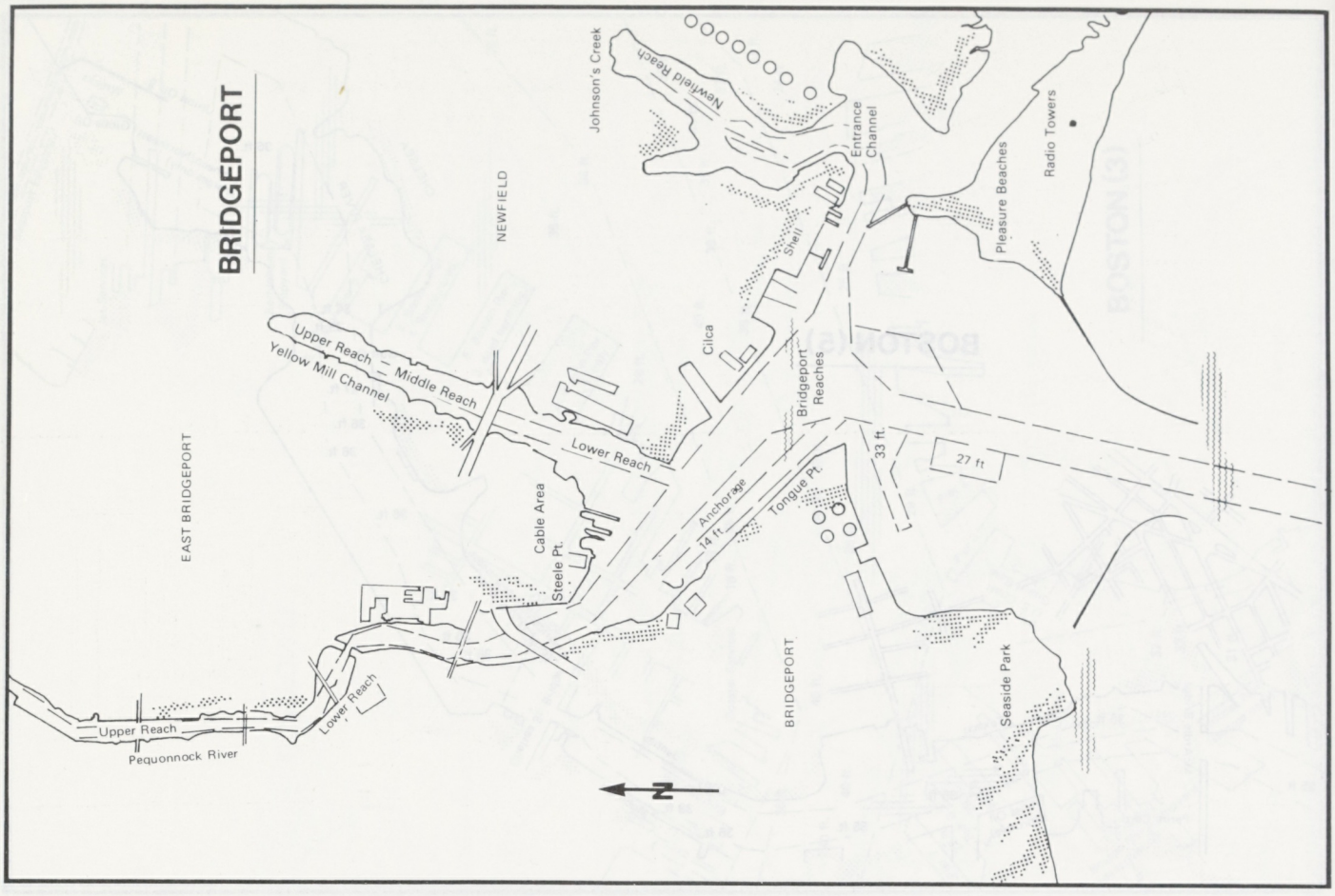

BOSTON (2)
Commonwealth Pier
Boston Fish Pier
Pier 7
Pier 6
Pier 5
Pier 4
Pier 3
Pier 2
Pier 1
40 ft.
38 ft.
27 ft.
24 ft.
25 ft.
28 ft.
30 ft.
33 ft.
30 ft.
31 ft.
29 ft.
30 ft.
43 ft.
38 ft.
38 ft.
32 ft.
Boston Naval Shipyard Annex (deactivated)
Stacks
Army Base
Retractile Bridge
Reserved Channel
33 ft.
38 ft.
40 ft.
32 ft.
Eastern Minerals
White Fuel
Castle Island
Sea-Land Container Terminal

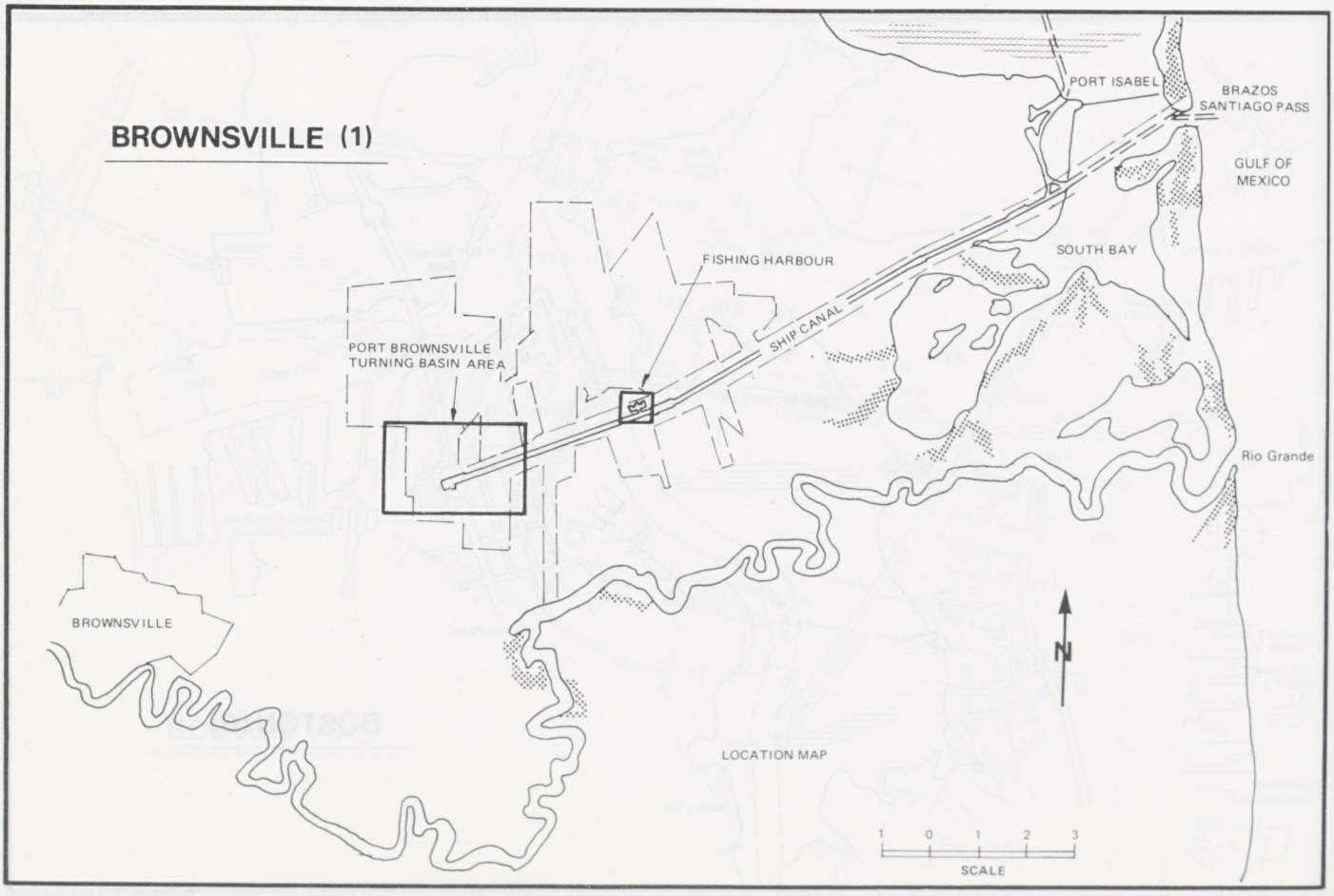

BOSTON (3)
Massport Fireboat
Jet Services
Bethlehem Shipyard
E. Boston Pier 5
E. Boston Pier 4 Sheds razed
E. Boston Pier 3 dead berthing
E. Boston Pier 1 only
Coastal Services
Boston Fuel Transportation
Pier 2
Pier 3
U.S. Coast Guard Base
Pier 4
Pier 5
Pier 6
Pier 7
Hoosac Pier (storage only)
Boston Naval Shipyard (deactivated)
39 ft.
36 ft.
35 ft.
37 ft.
23 ft.
24 ft.
25 ft.
26 ft.
18 ft.
29 ft.
32 ft.
33 ft.
31 ft.
27 ft.
29 ft.

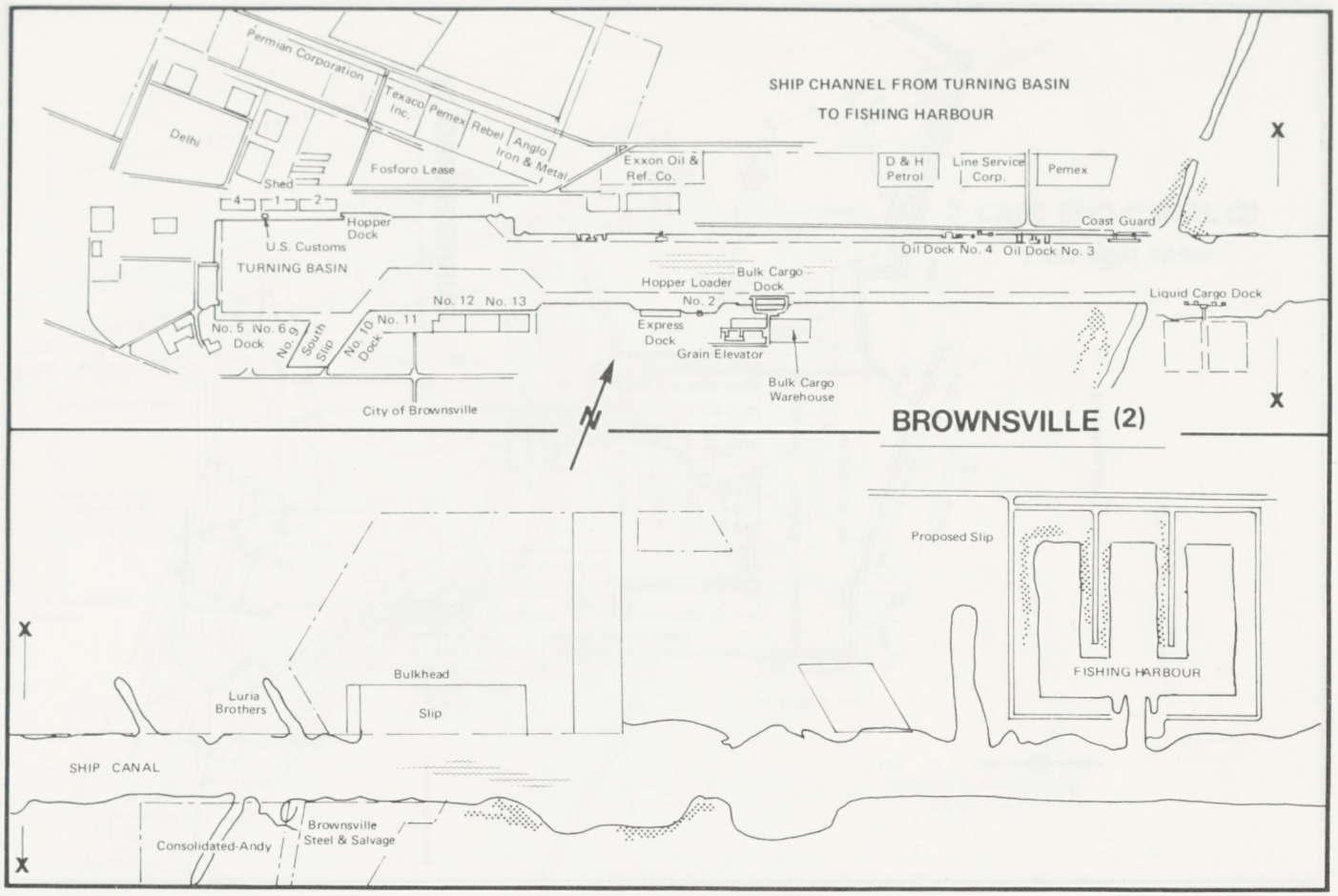

BOSTON (4)
Prolerized
Exxon USA
Allied Concrete
Cable Area
American (Domino) Sugar
Revere Sugar
Atlantic Cement
Pier 51
Schiavone Terminal
Massport Container Terminal
U.S. Gypsum
Mystic River Bridge
Munro Drydock
Metropolitan Petroleum
Fournier Marine
Pier 48
Pier 49
Mystic Pier
Little Mystic Channel
35ft Depth
Boston Towboat Wharf
General Ship & Engine
Pier 11
Dry docks
Pier 10
Bromfield Shipyard
29 ft.
37 ft.
35 ft.
36 ft.
40 ft.
41 ft.
42 ft.

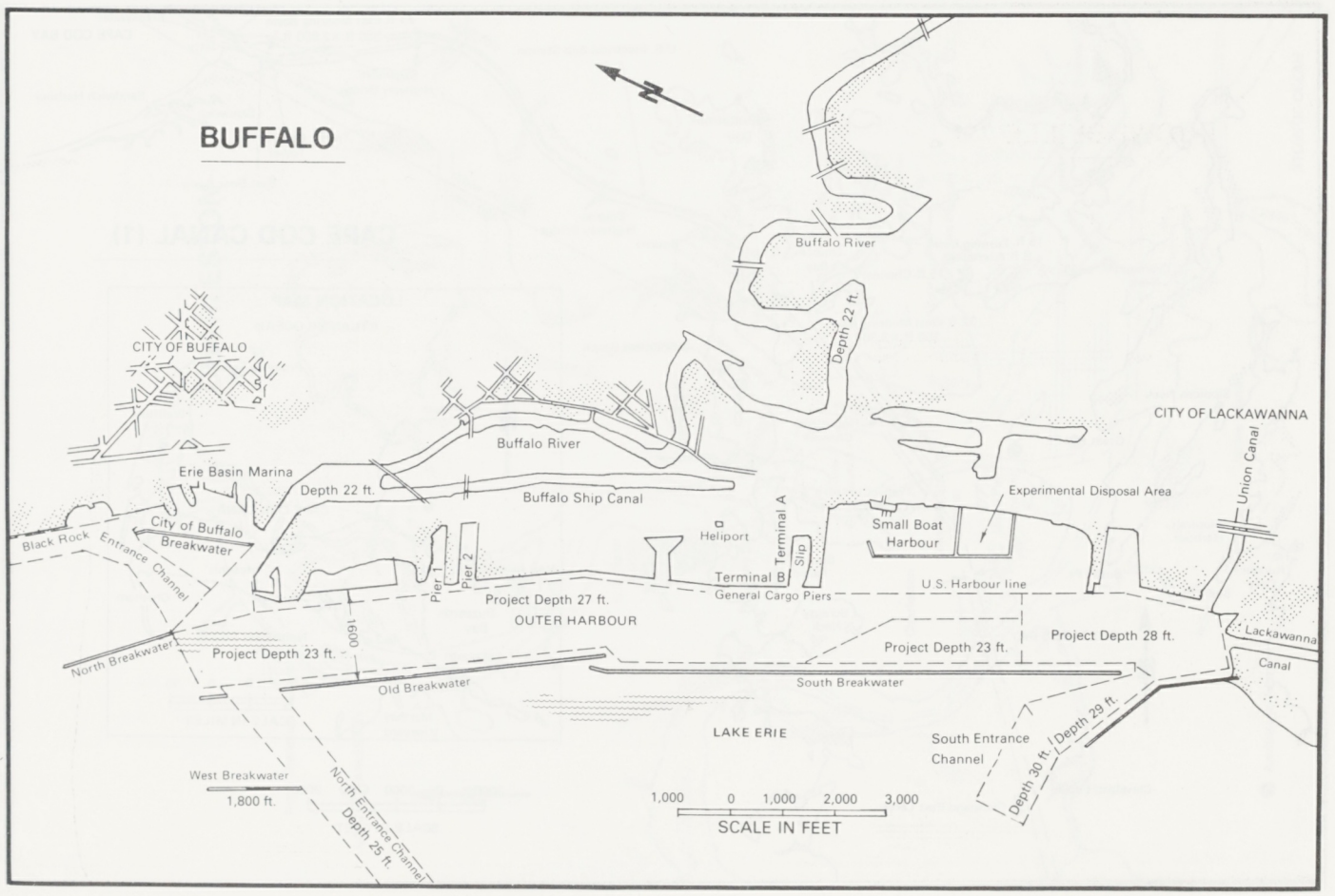

BOSTON (5)
Union Oil
Wrecks
Gibbs Oil
Tenneco/Northeast (barges only)
36 ft.
CHELSEA
CHELSEA RIVER
34 ft.
35 ft.
Gulf Oil
37 ft.
36 ft.
36 ft.
36 ft.
American Oil/Northeast
Chelsea St. Bridge
36 ft.
36 ft.
35 ft.
McArdle Bridge
35 ft.
Texaco
Jenney
35 ft
35 ft.
Perini Corp.
Hess Oil (inactive)
35 ft.
38 ft.
Mobil Oil
36 ft.

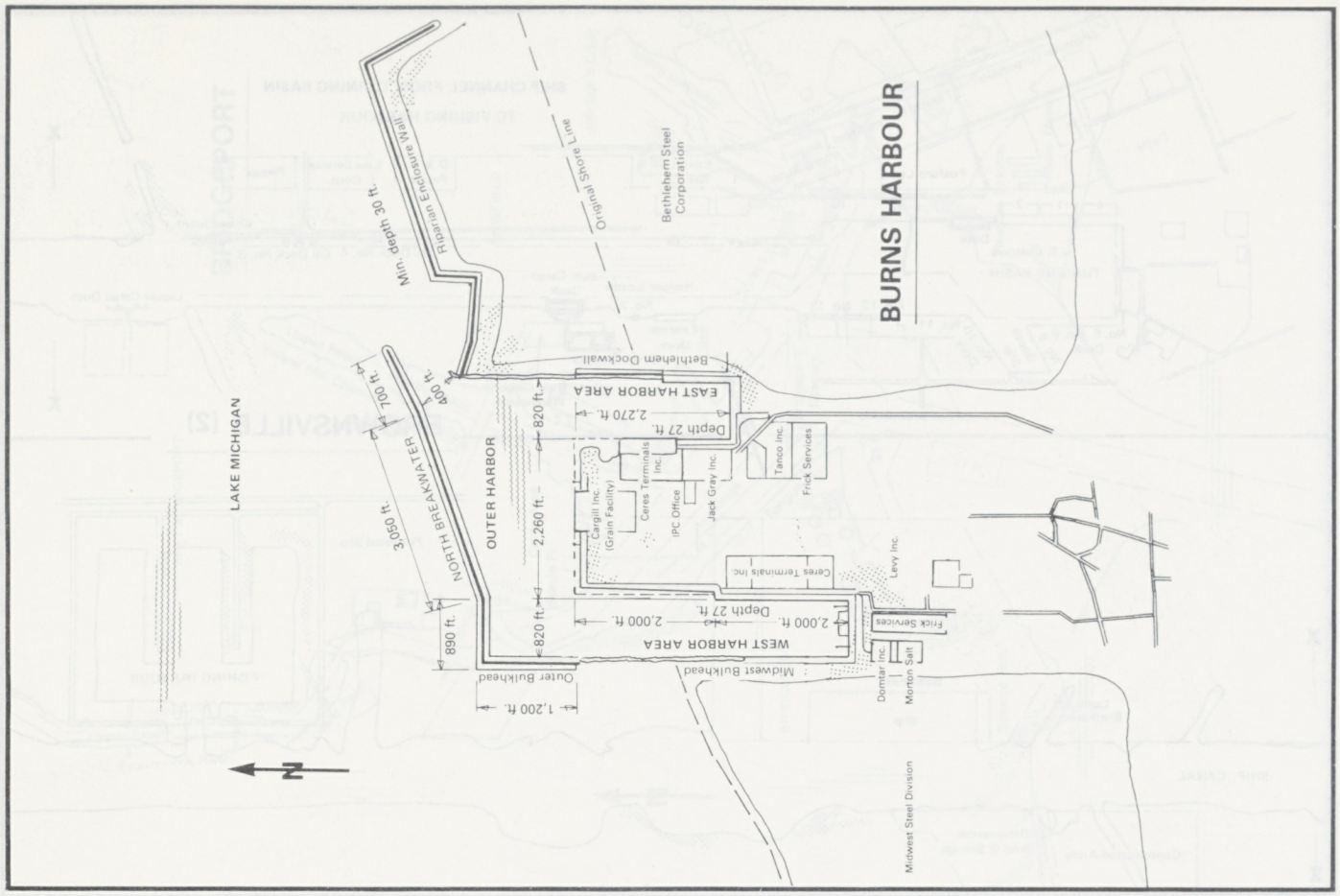

BOSTON (6)
29ft depth in Channel
C.H. Sprague & Sons
Towers
Entrance Channel
TOWN RIVER BAY
Mobil Oil
27ft depth
650ft
Cities Service Oil
General Dynamics Quincy Shipyard
Hole Point Reach
Quincy Point
Quincy Oil

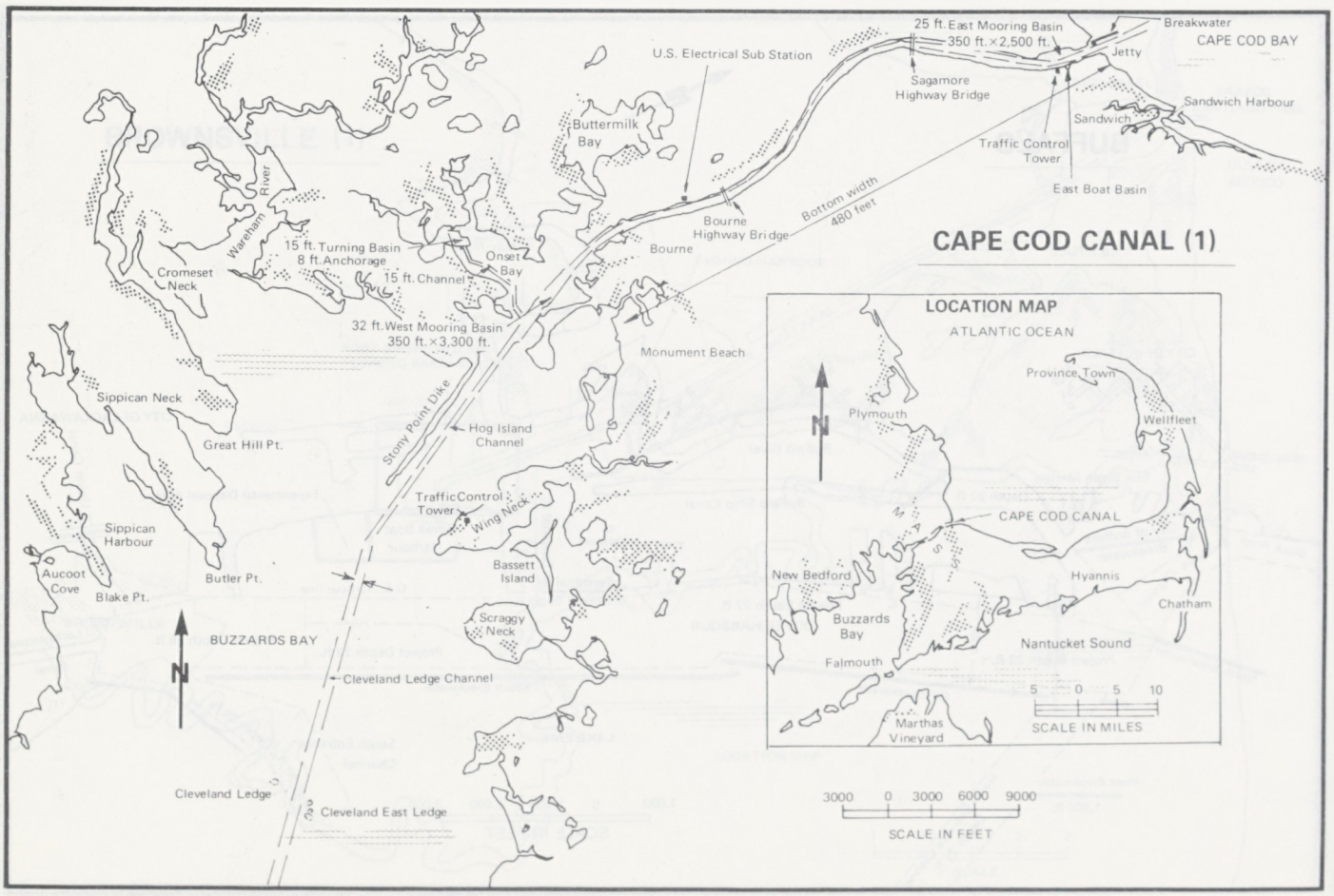

BRIDGEPORT
Johnson's Creek
Newfield Reach
NEWFIELD
Entrance Channel
Shell
Pleasure Beaches
Radio Towers
Upper Reach
Middle Reach
Yellow Mill Channel
Cilca
Bridgeport Reaches
EAST BRIDGEPORT
Lower Reach
33 ft.
27 ft
Cable Area
Steele Pt.
Anchorage
14 ft
Tongue Pt.
BRIDGEPORT
Seaside Park
Upper Reach
Lower Reach
Pequonnock River
N

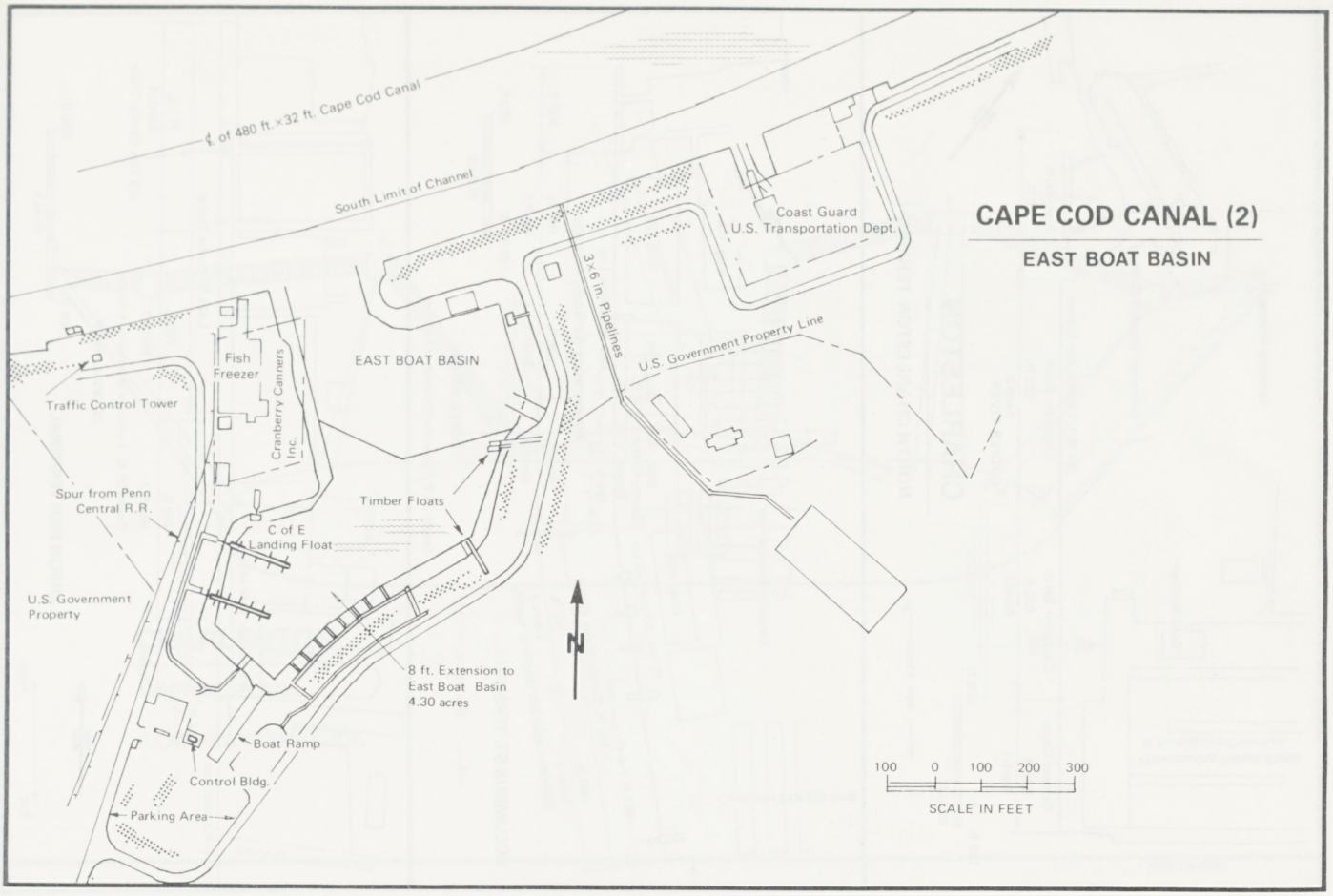

BROWNSVILLE (1)
PORT ISABEL
BRAZOS SANTIAGO PASS
GULF OF MEXICO
SOUTH BAY
FISHING HARBOUR
SHIP CANAL
PORT BROWNSVILLE TURNING BASIN AREA
Rio Grande
BROWNSVILLE
N
LOCATION MAP
1 0 1 2 3
SCALE

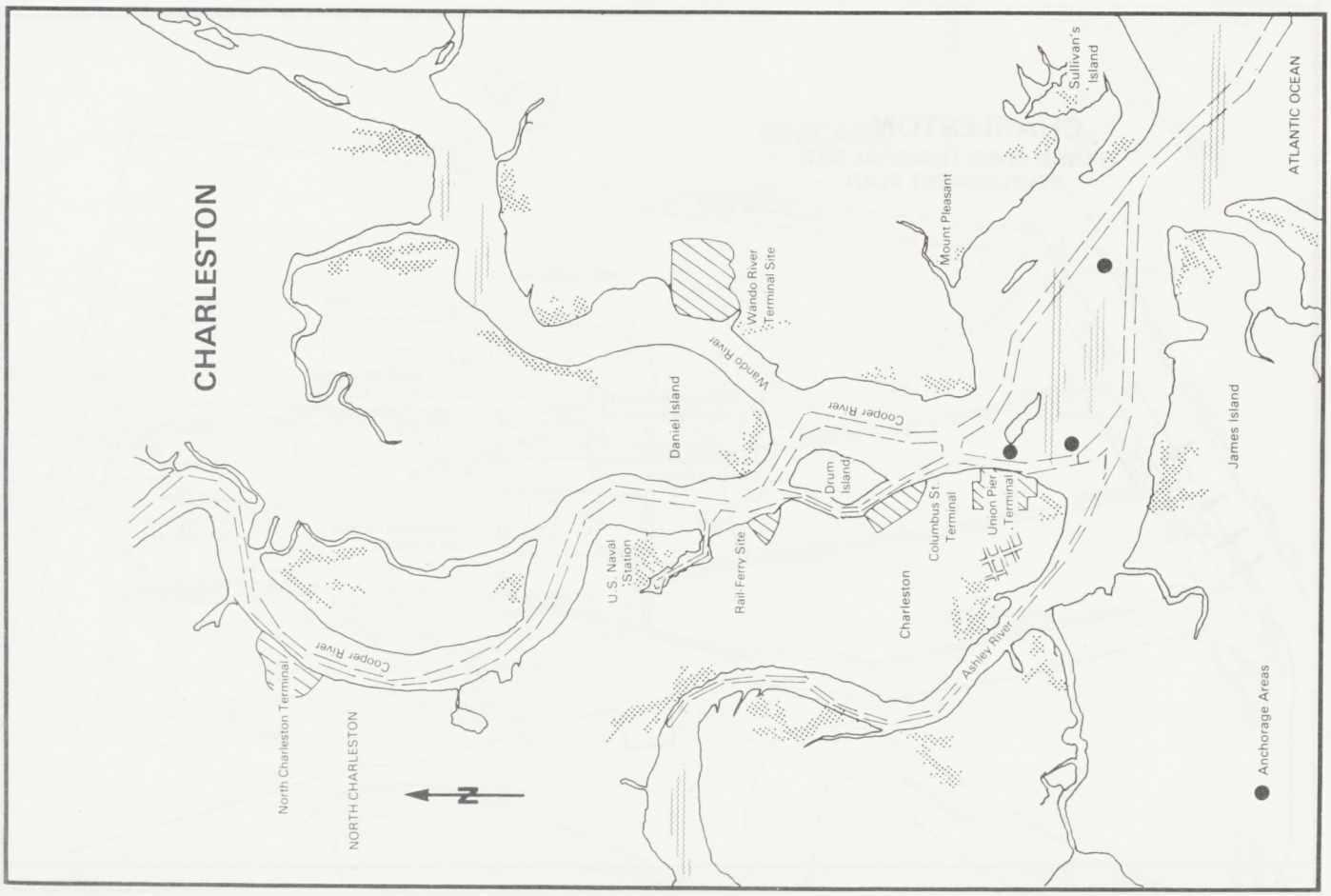

SHIP CHANNEL FROM TURNING BASIN
TO FISHING HARBOUR
Permian Corporation
Texaco Inc.
Pemex
Rebel
Anglo Iron & Metal
Delhi
Shed
Fosforo Lease
Exxon Oil & Ref. Co.
D & H Petrol
Line Service Corp.
Pemex
Coast Guard
Hopper Dock
U.S. Customs
TURNING BASIN
Oil Dock No. 4
Oil Dock No. 3
Hopper Loader
Bulk Cargo Dock
No. 2
Liquid Cargo Dock
No. 12
No. 13
No. 11
No. 5 Dock
No. 6 Dock
No. 8 South Slip
No. 10 Dock
Express Dock
Grain Elevator
Bulk Cargo Warehouse
City of Brownsville
BROWNSVILLE (2)
Proposed Slip
FISHING HARBOUR
Bulkhead
Slip
Luria Brothers
SHIP CANAL
Brownsville Steel & Salvage
Consolidated-Andy

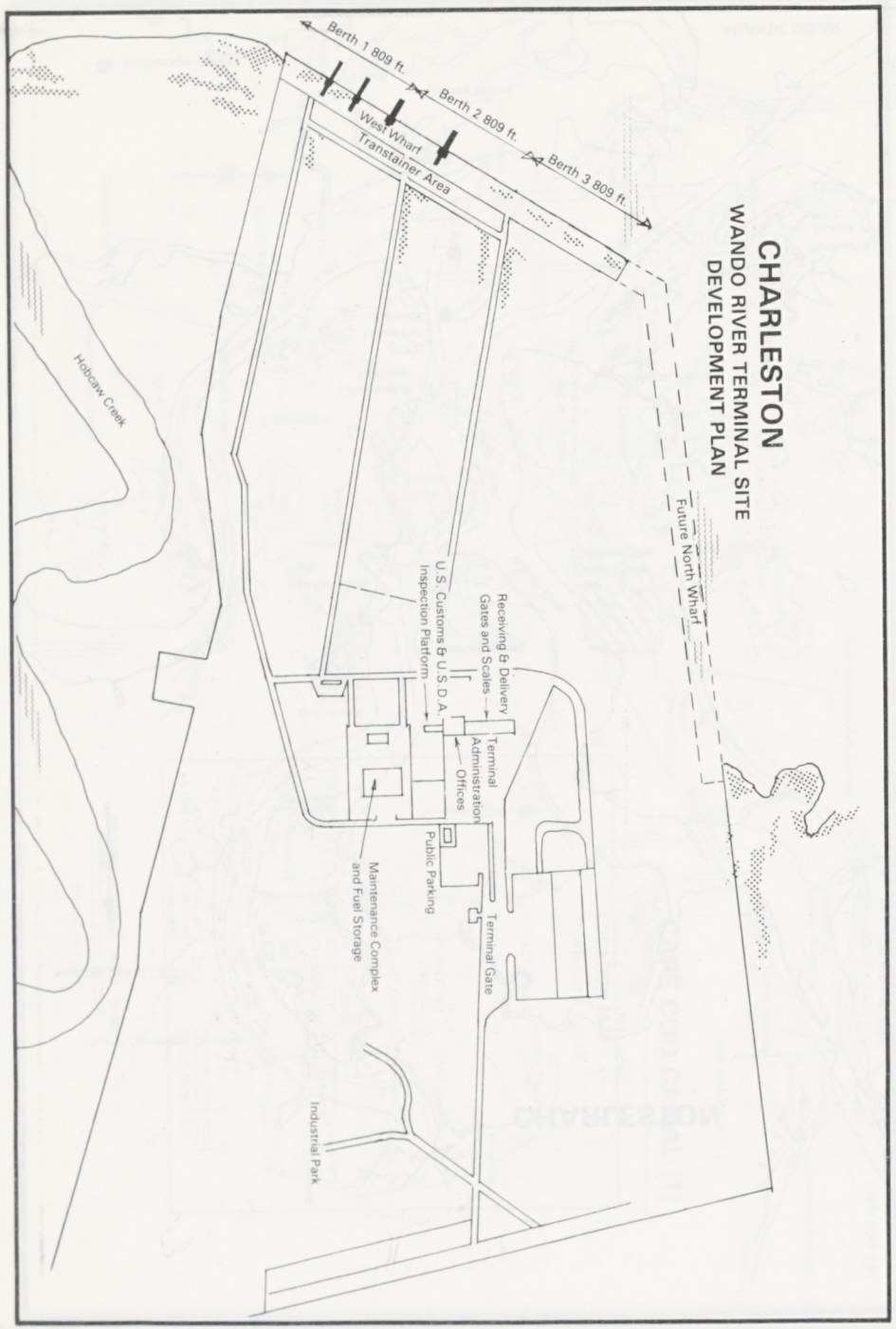

BUFFALO
Buffalo River
CITY OF BUFFALO
Depth 22 ft.
CITY OF LACKAWANNA
Union Canal
Buffalo River
Erie Basin Marina
Depth 22 ft.
Buffalo Ship Canal
Experimental Disposal Area
City of Buffalo Breakwater
Black Rock Entrance Channel
Heliport
Terminal A
Slip
Small Boat Harbour
Pier 1
Pier 2
Terminal B
General Cargo Piers
U.S. Harbour line
Project Depth 27 ft.
OUTER HARBOUR
1600
Project Depth 28 ft.
Project Depth 23 ft.
Project Depth 23 ft.
North Breakwater
Old Breakwater
South Breakwater
Lackawanna Canal
LAKE ERIE
South Entrance Channel
Depth 29 ft.
Depth 30 ft.
West Breakwater
1,800 ft.
North Entrance Channel
Depth 25 ft.
1,000 0 1,000 2,000 3,000
SCALE IN FEET

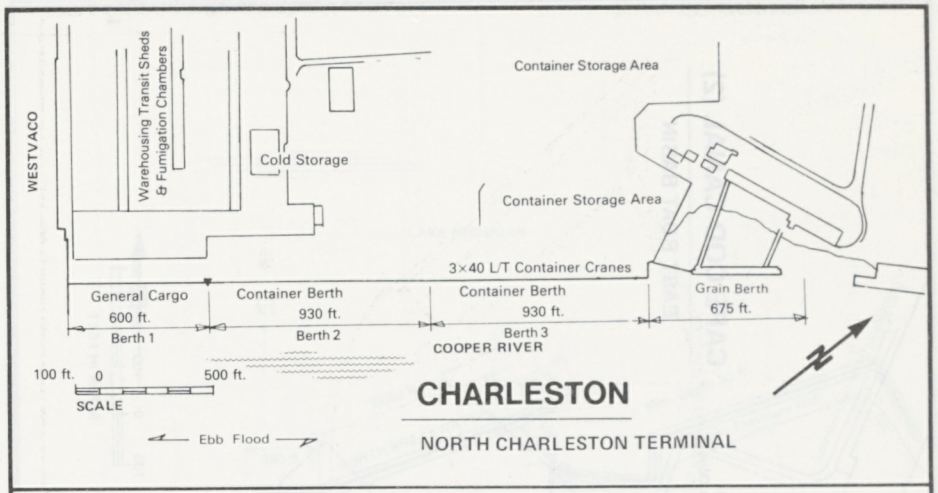

BURNS HARBOUR
Min. depth 30 ft.
Riparian Enclosure Wall
Original Shore Line
Bethlehem Steel Corporation
Bethlehem Dockwall
EAST HARBOR AREA
2,270 ft.
Depth 27 ft.
820 ft.
400 ft.
700 ft.
LAKE MICHIGAN
NORTH BREAKWATER
3,050 ft.
OUTER HARBOR
2,260 ft.
Cargill Inc. (Grain Facility)
Ceres Terminals Inc.
IPC Office
Jack Gray Inc.
Tanco Inc.
Frick Services
Ceres Terminals Inc
Levy Inc.
Frick Services
2,000 ft.
Depth 27 ft.
2,000 ft.
WEST HARBOR AREA
890 ft.
820 ft.
Outer Bulkhead
1,200 ft.
Midwest Bulkhead
Domtar Inc.
Morton Salt
Midwest Steel Division
N

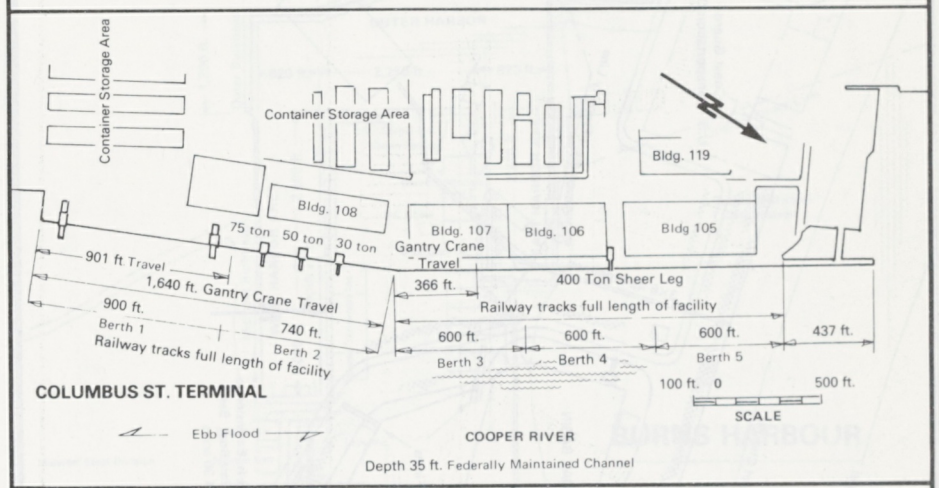

CAPE COD CANAL (1)
25 ft. East Mooring Basin
350 ft. × 2,500 ft.
Breakwater
CAPE COD BAY
Jetty
U.S. Electrical Sub Station
Sagamore Highway Bridge
Sandwich Harbour
Sandwich
Traffic Control Tower
East Boat Basin
Buttermilk Bay
Bourne Highway Bridge
Bottom width 480 feet
Bourne
Wareham River
15 ft. Turning Basin
8 ft. Anchorage
15 ft. Channel
Onset Bay
Cromeset Neck
32 ft. West Mooring Basin
350 ft. × 3,300 ft.
Monument Beach
Sippican Neck
Great Hill Pt.
Stony Point Dike
Hog Island Channel
Traffic Control Tower
Wing Neck
Sippican Harbour
Aucoot Cove
Blake Pt.
Butler Pt.
Bassett Island
Scraggy Neck
BUZZARDS BAY
Cleveland Ledge Channel
Cleveland Ledge
Cleveland East Ledge
N
LOCATION MAP
ATLANTIC OCEAN
Province Town
Plymouth
Wellfleet
CAPE COD CANAL
New Bedford
Hyannis
Chatham
Buzzards Bay
Nantucket Sound
Falmouth
Marthas Vineyard
5 0 5 10
SCALE IN MILES
3000 0 3000 6000 9000
SCALE IN FEET

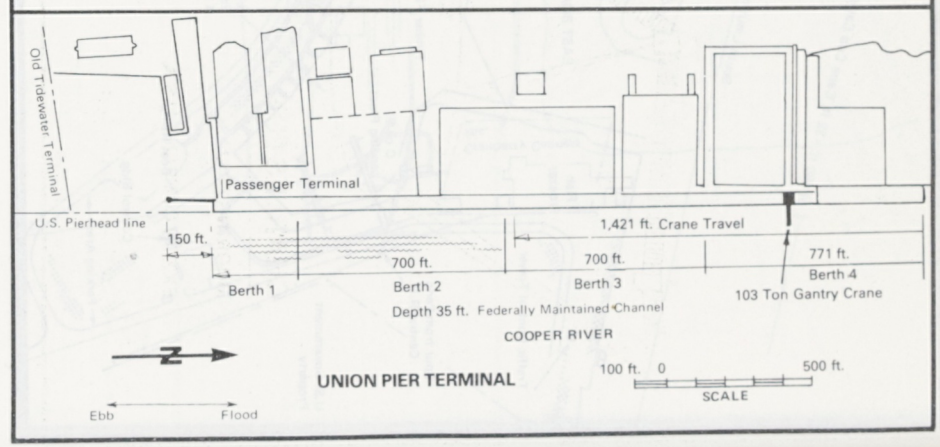

℄ of 480 ft. × 32 ft. Cape Cod Canal
South Limit of Channel
Coast Guard
U.S. Transportation Dept.
CAPE COD CANAL (2)
EAST BOAT BASIN
3×6 in. Pipelines
U.S. Government Property Line
EAST BOAT BASIN
Fish Freezer
Cranberry Canners Inc.
Traffic Control Tower
Spur from Penn Central R.R.
Timber Floats
C of E Landing Float
U.S. Government Property
8 ft. Extension to East Boat Basin 4.30 acres
Boat Ramp
Control Bldg.
Parking Area
N
100 0 100 200 300
SCALE IN FEET

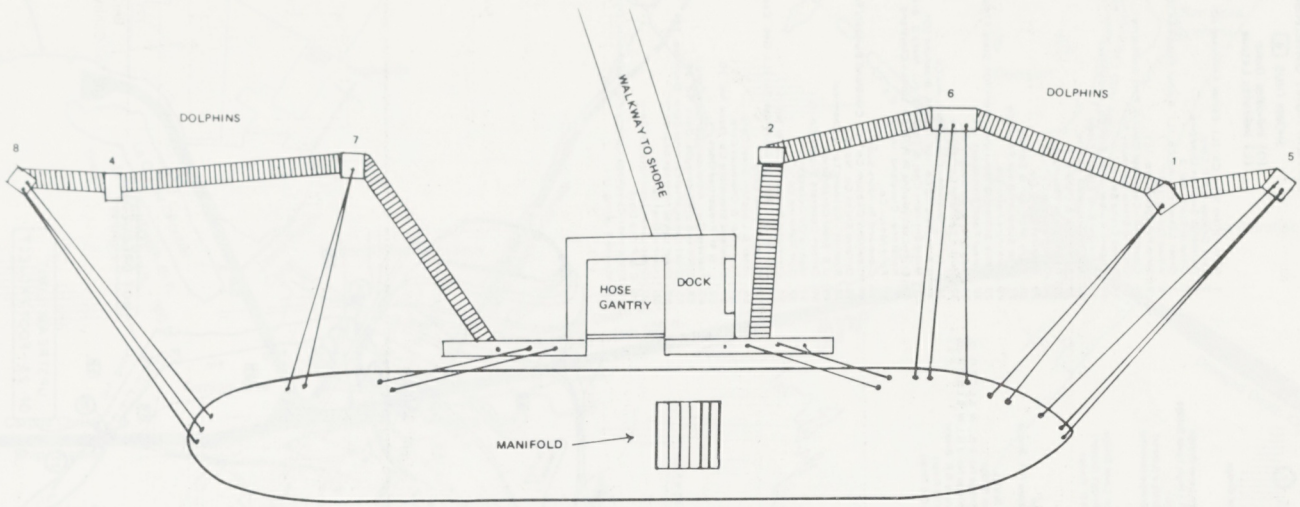

CHARLESTON
ATLANTIC OCEAN
Sullivan's Island
Mount Pleasant
Wando River Terminal Site
Wando River
Cooper River
Daniel Island
Drum Island
Columbus St Terminal
Union Pier Terminal
James Island
U.S. Naval Station
Rail-Ferry Site
Charleston
Ashley River
Cooper River
North Charleston Terminal
NORTH CHARLESTON
N
Anchorage Areas


CHARLESTON
WANDO RIVER TERMINAL SITE
DEVELOPMENT PLAN
Berth 1 809 ft.
Berth 2 809 ft.
Berth 3 809 ft.
West Wharf
Transtainer Area
Future North Wharf
Hobcaw Creek
U.S. Customs & U.S.D.A. Inspection Platform
Receiving & Delivery Gates and Scales
Terminal Administration Offices
Public Parking
Maintenance Complex and Fuel Storage
Terminal Gate
Industrial Park


WESTVACO
Warehousing Transit Sheds & Fumigation Chambers
Cold Storage
Container Storage Area
Container Storage Area
3×40 L/T Container Cranes
General Cargo
600 ft.
Berth 1
Container Berth
930 ft.
Berth 2
Container Berth
930 ft.
Berth 3
Grain Berth
675 ft.
COOPER RIVER
100 ft. 0 500 ft.
SCALE
Ebb Flood
CHARLESTON
NORTH CHARLESTON TERMINAL


Container Storage Area
Container Storage Area
Bldg. 119
Bldg. 108
Bldg. 107
Bldg. 106
Bldg 105
75 ton 50 ton 30 ton
Gantry Crane Travel
901 ft Travel
1,640 ft. Gantry Crane Travel
366 ft.
400 Ton Sheer Leg
Railway tracks full length of facility
900 ft.
Berth 1
740 ft.
Berth 2
Railway tracks full length of facility
600 ft.
Berth 3
600 ft.
Berth 4
600 ft.
Berth 5
437 ft.
100 ft. 0 500 ft.
SCALE
COLUMBUS ST. TERMINAL
Ebb Flood
COOPER RIVER
Depth 35 ft. Federally Maintained Channel


Old Tidewater Terminal
Passenger Terminal
U.S. Pierhead line
150 ft.
Berth 1
700 ft.
Berth 2
1,421 ft. Crane Travel
700 ft.
Berth 3
771 ft.
Berth 4
103 Ton Gantry Crane
Depth 35 ft. Federally Maintained Channel
COOPER RIVER
UNION PIER TERMINAL
100 ft. 0 500 ft.
SCALE
Ebb
Flood

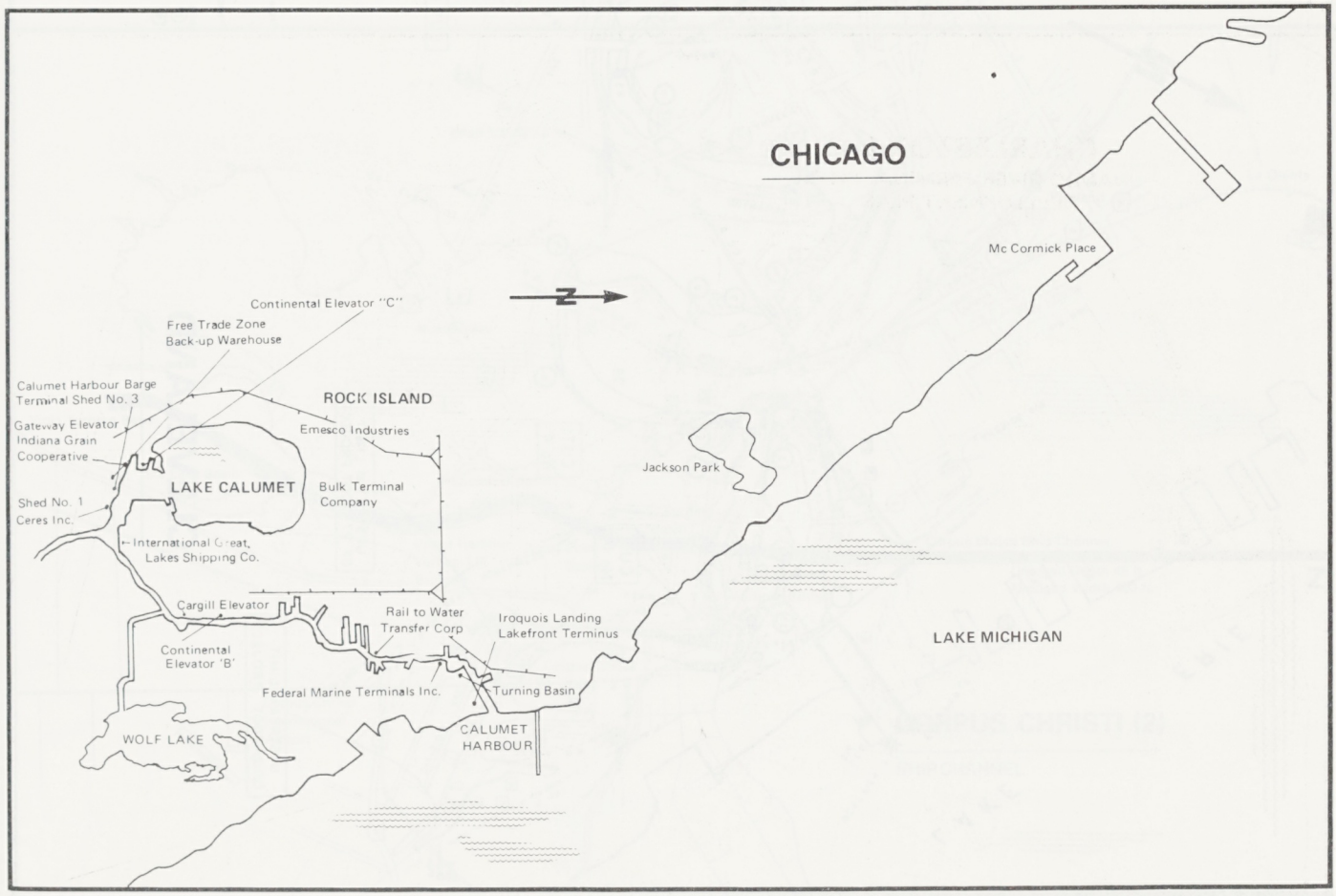


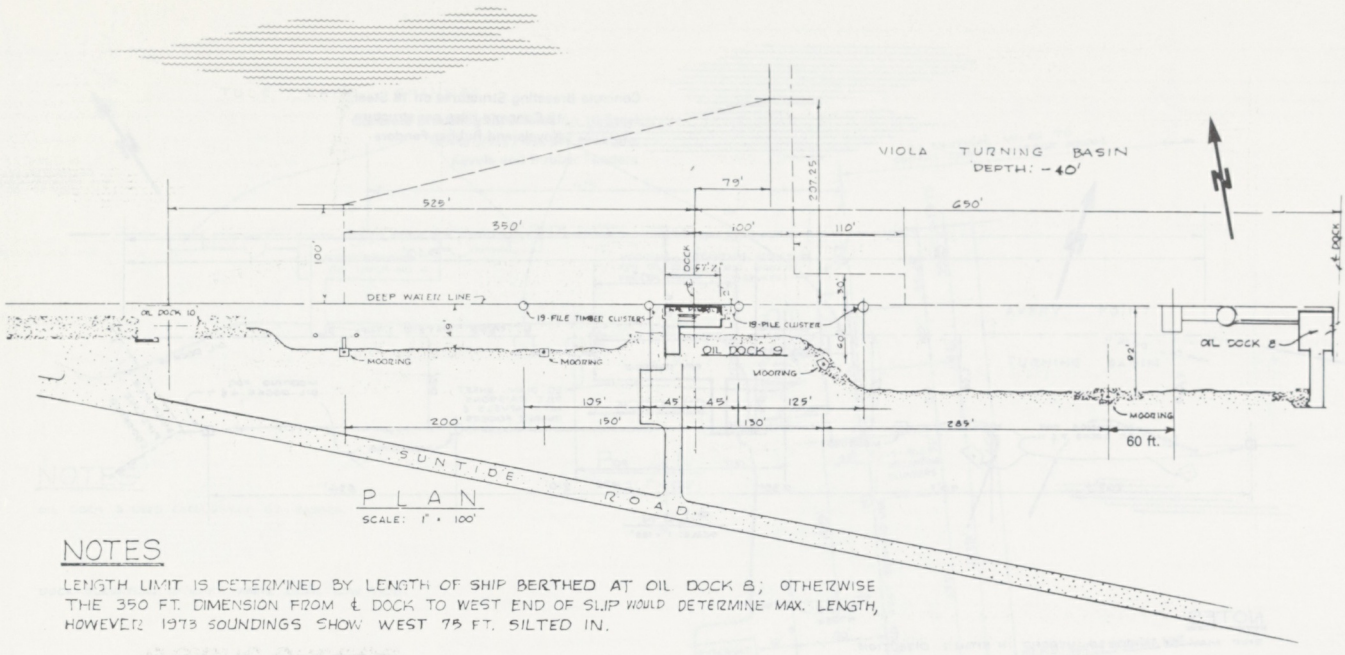
CHARLESTON

MOORING PLAN

EXXON COMPANY U.S.A.

N





PLAN
SCALE: 1" = 100'

NOTES

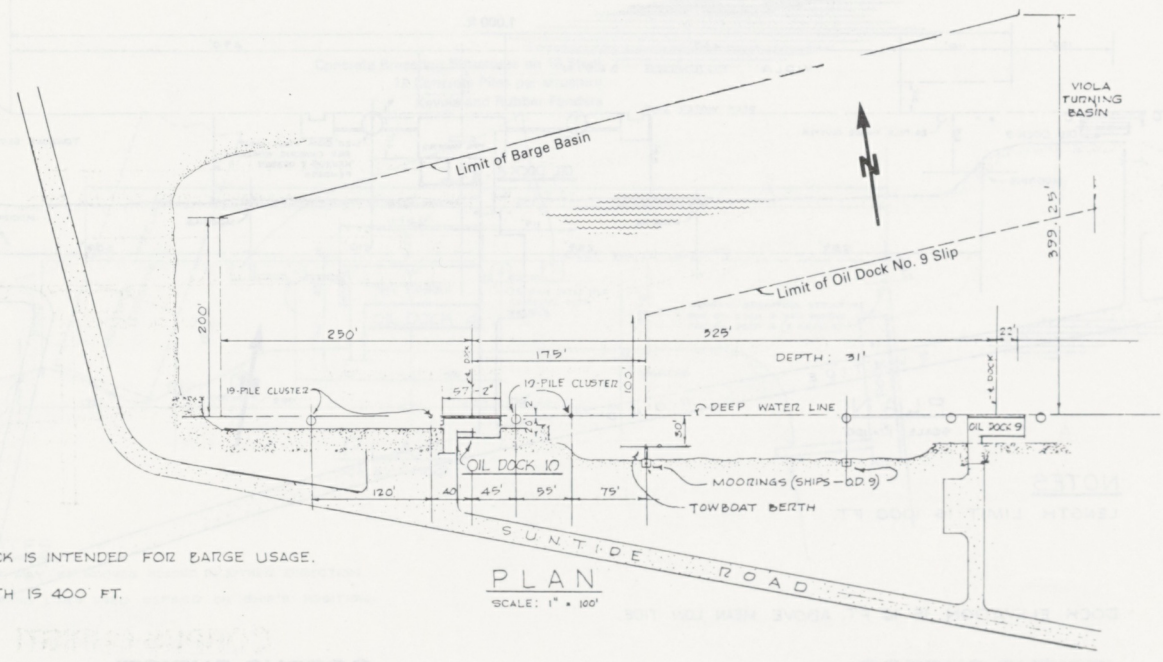
LENGTH LIMIT IS DETERMINED BY LENGTH OF SHIP BERTHED AT OIL DOCK 8; OTHERWISE THE 350 FT. DIMENSION FROM ℄ DOCK TO WEST END OF SLIP WOULD DETERMINE MAX. LENGTH, HOWEVER 1973 SOUNDINGS SHOW WEST 75 FT. SILTED IN.

DOCK ELEVATION IS 9 FT.-6 IN. ABOVE MEAN LOW TIDE.

Oil Dock 9 is intended for use by Barges and Small Tankers

CORPUS CHRISTI

OIL DOCK No.9



PLAN
SCALE: 1" = 100'

NOTES

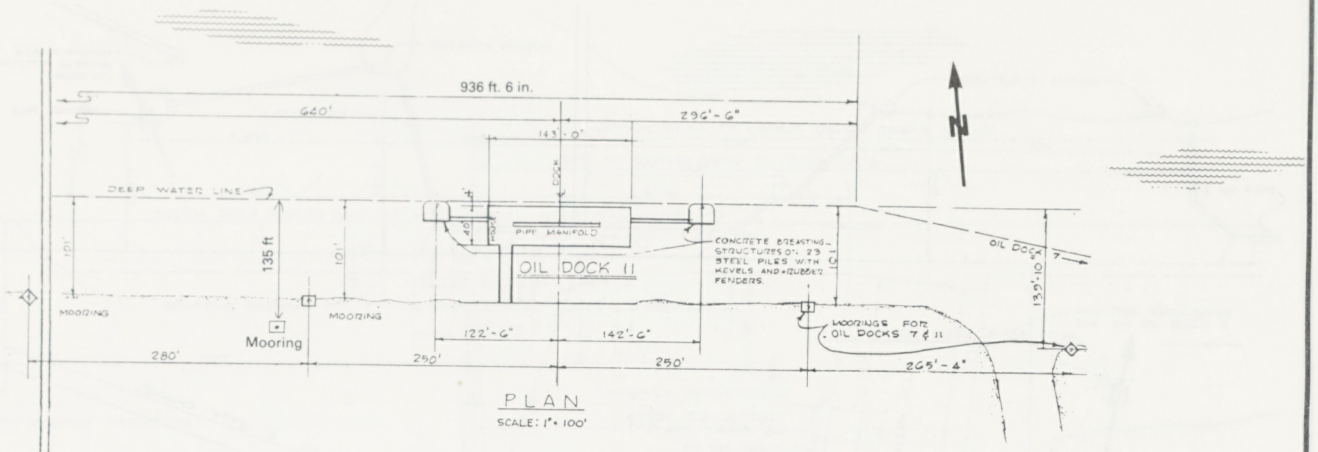
THIS OIL DOCK IS INTENDED FOR BARGE USAGE.

SLIP LENGTH IS 400 FT.

DOCK ELEVATION IS 9 FT., 6 IN. ABOVE MEAN LOW TIDE.

CORPUS CHRISTI

OIL DOCK No.10



NOTES

SHIP MAY BE MOORED HEADED IN EITHER DIRECTION.

MOORING LINES USED DEPEND ON SHIP'S POSITION.

SLIP HAS A MINIMUM DEPTH OF 37 FT. BELOW MEAN LOW TIDE ACCORDING TO SOUNDINGS MADE IN 1975

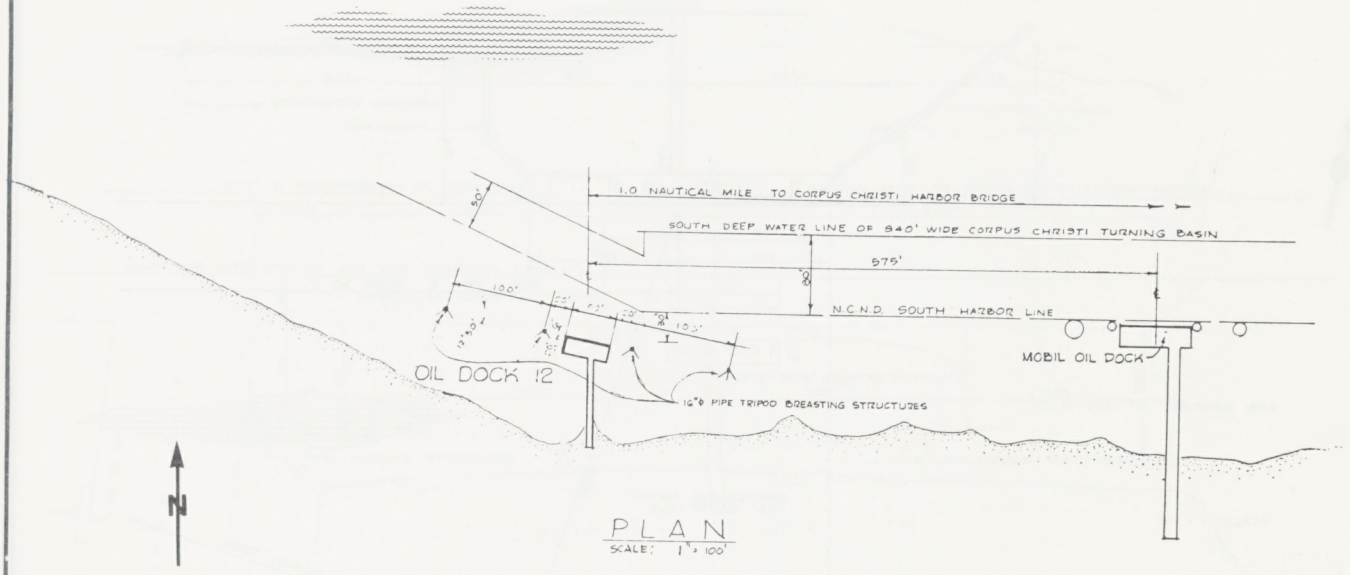
BEAM UNLIMITED.

LENGTH LIMIT: 850 FT. SHIPS AT OIL DOCKS 4, 7 & 11 AT THE SAME TIME. LONGER SHIPS MAY BE BERTHED WHEN ADJACENT SLIP IS NOT BEING FULLY UTILIZED.

DOCK ELEVATION IS 16 FT. ABOVE MEAN LOW TIDE.

CORPUS CHRISTI

OIL DOCK No.11



NOTES:

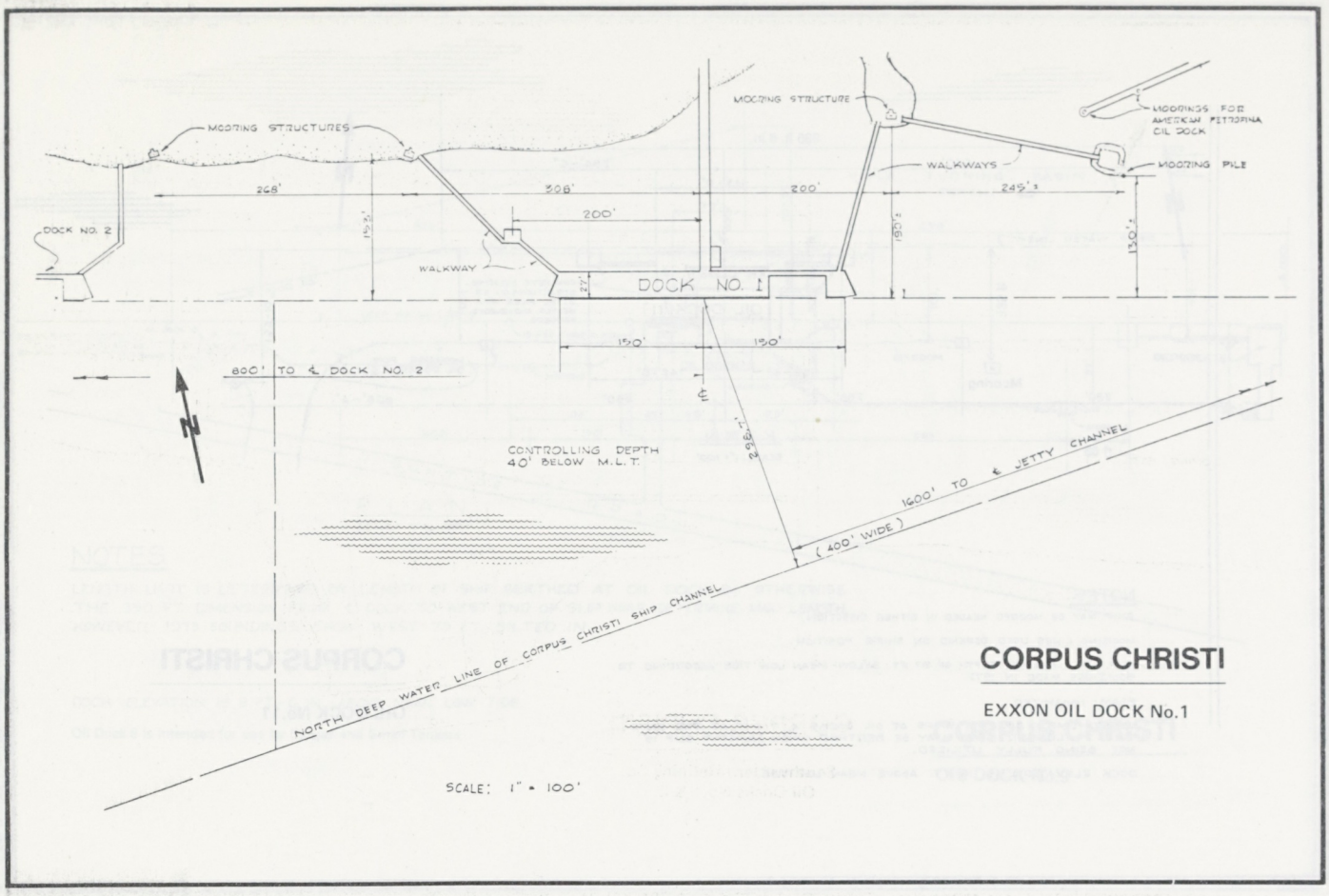
OIL DOCK 12 FOR BARGE USE ONLY.

DEPTH OF SLIP IS 9 FT. BELOW MEAN LOW TIDE, ACCORDING TO SOUNDINGS MADE IN 1976.

DOCK ELEVATION IS 8 FT. ABOVE M.L.T.

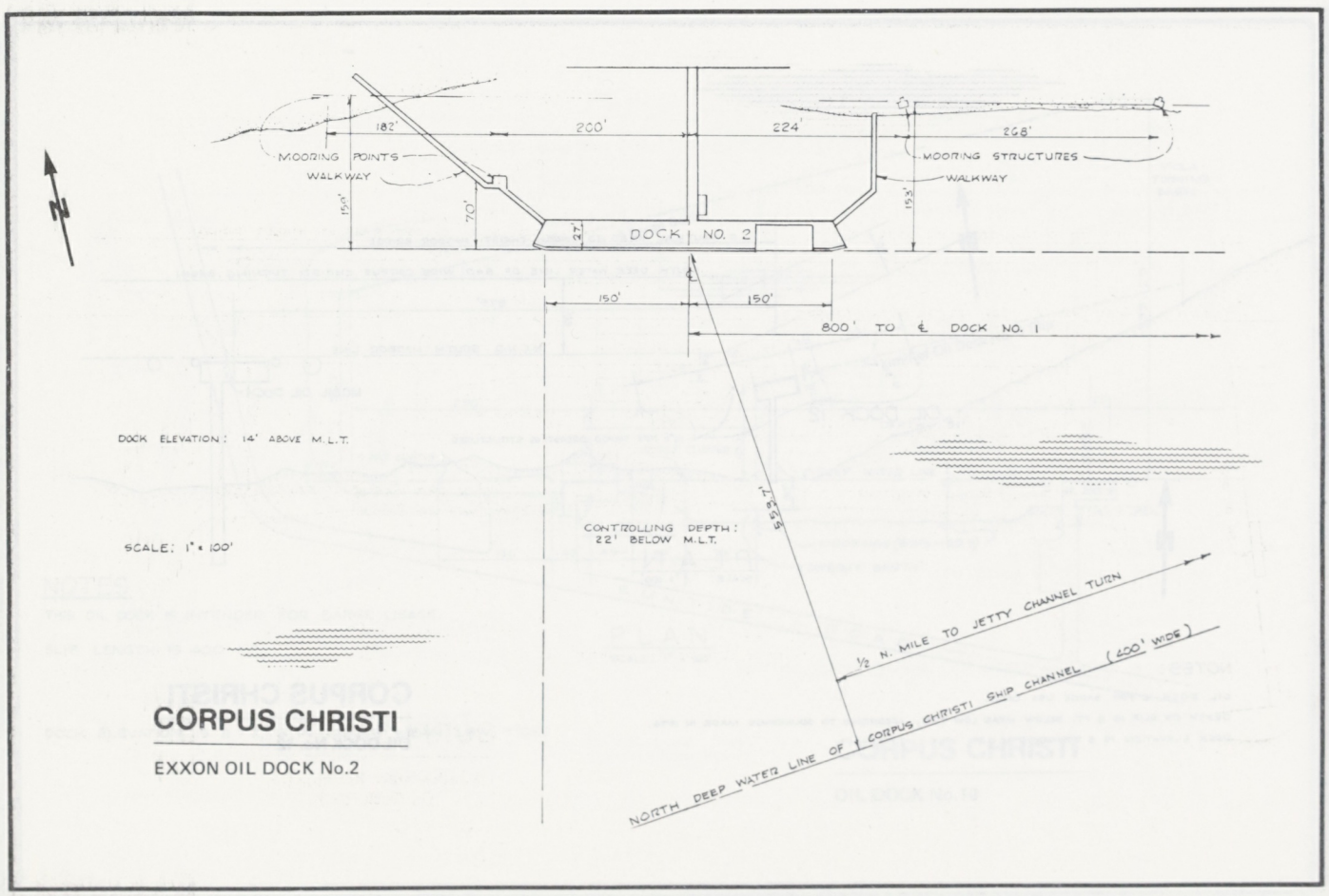
CORPUS CHRISTI

OIL DOCK No. 12



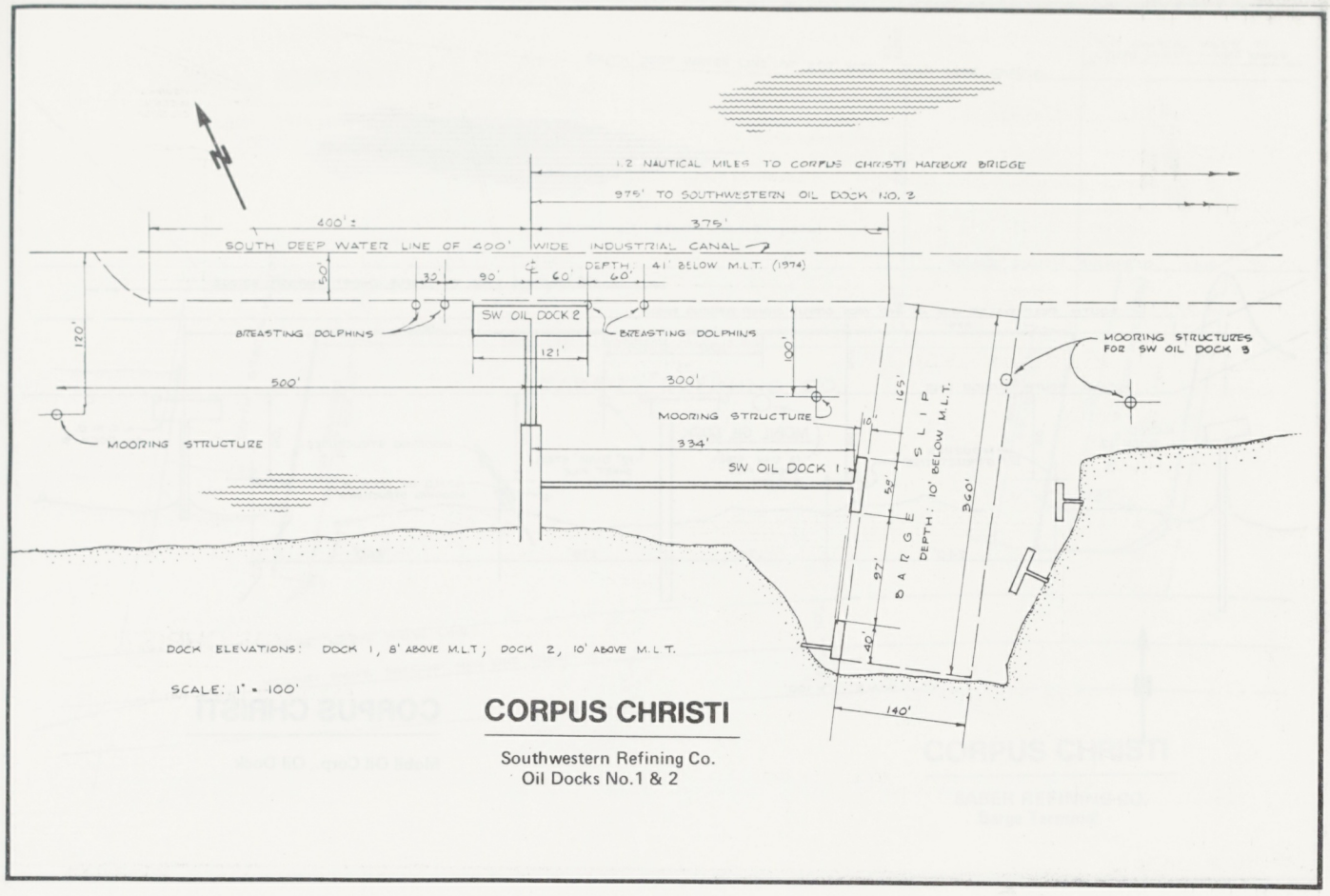
CORPUS CHRISTI

EXXON OIL DOCK No.1



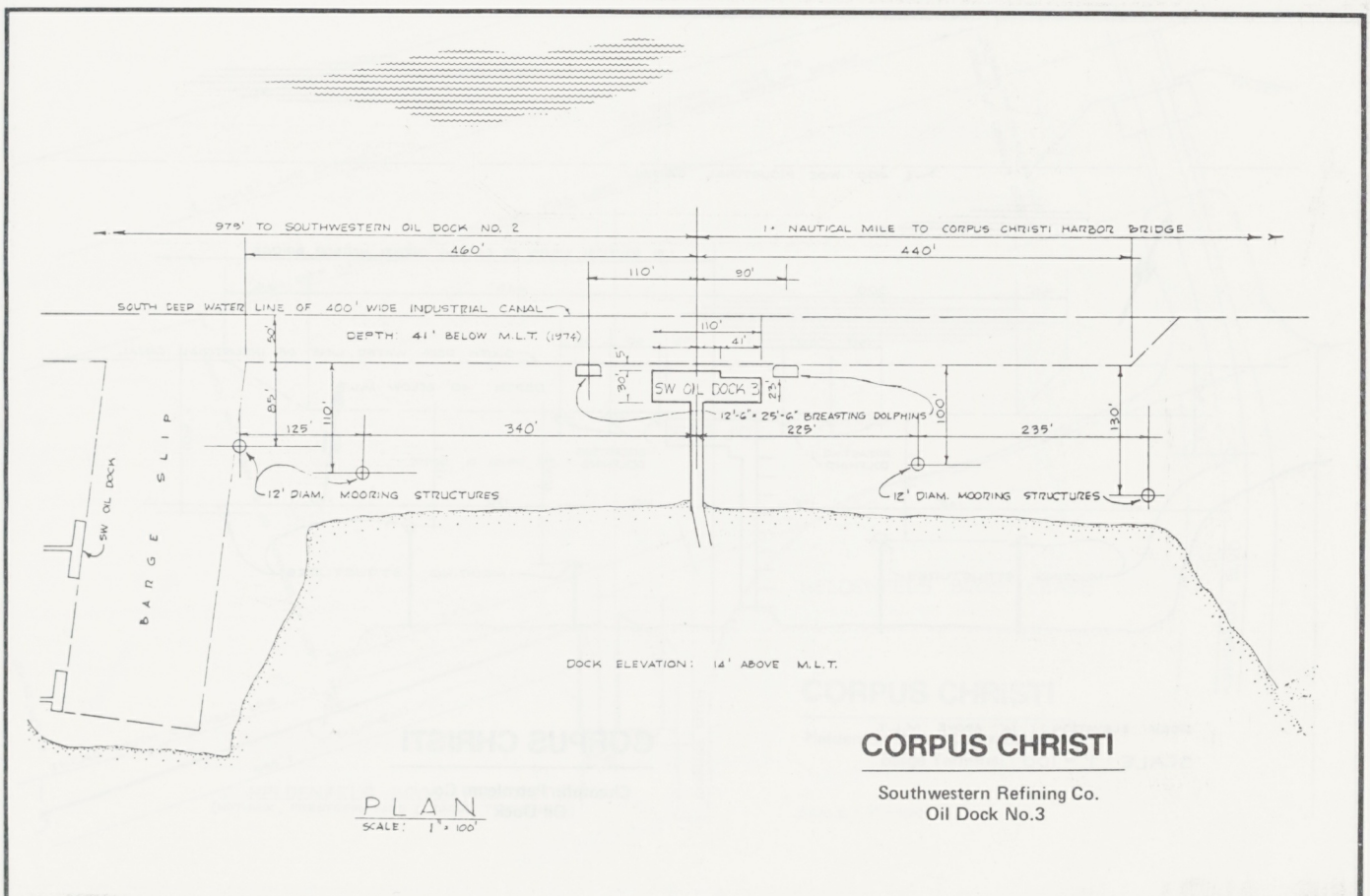
CORPUS CHRISTI

EXXON OIL DOCK No.2



CORPUS CHRISTI

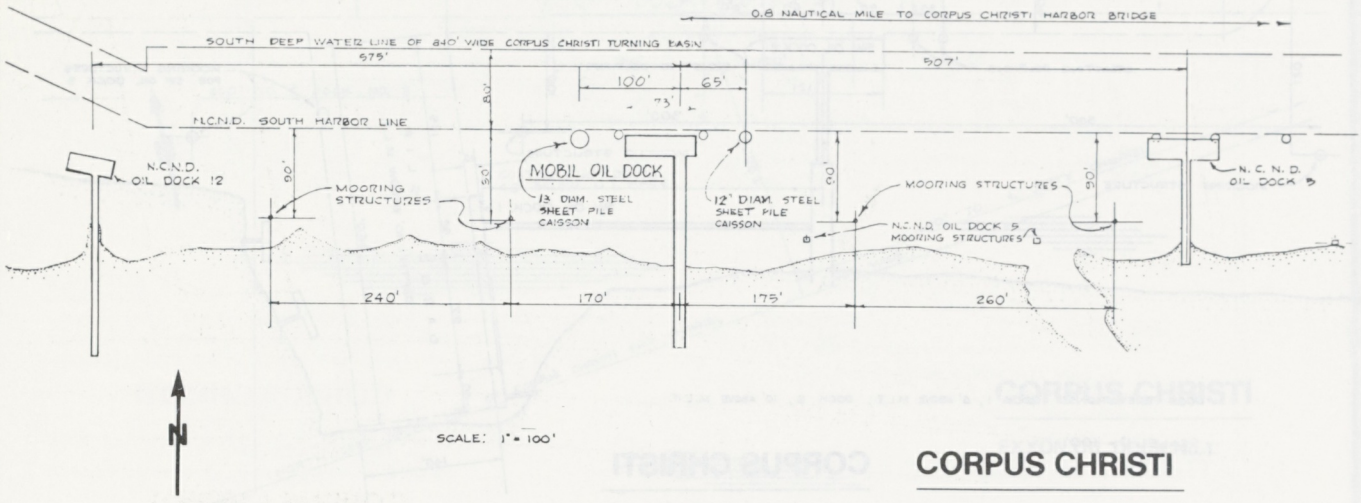
Southwestern Refining Co.
Oil Docks No.1 & 2



PLAN
SCALE: 1" = 100'

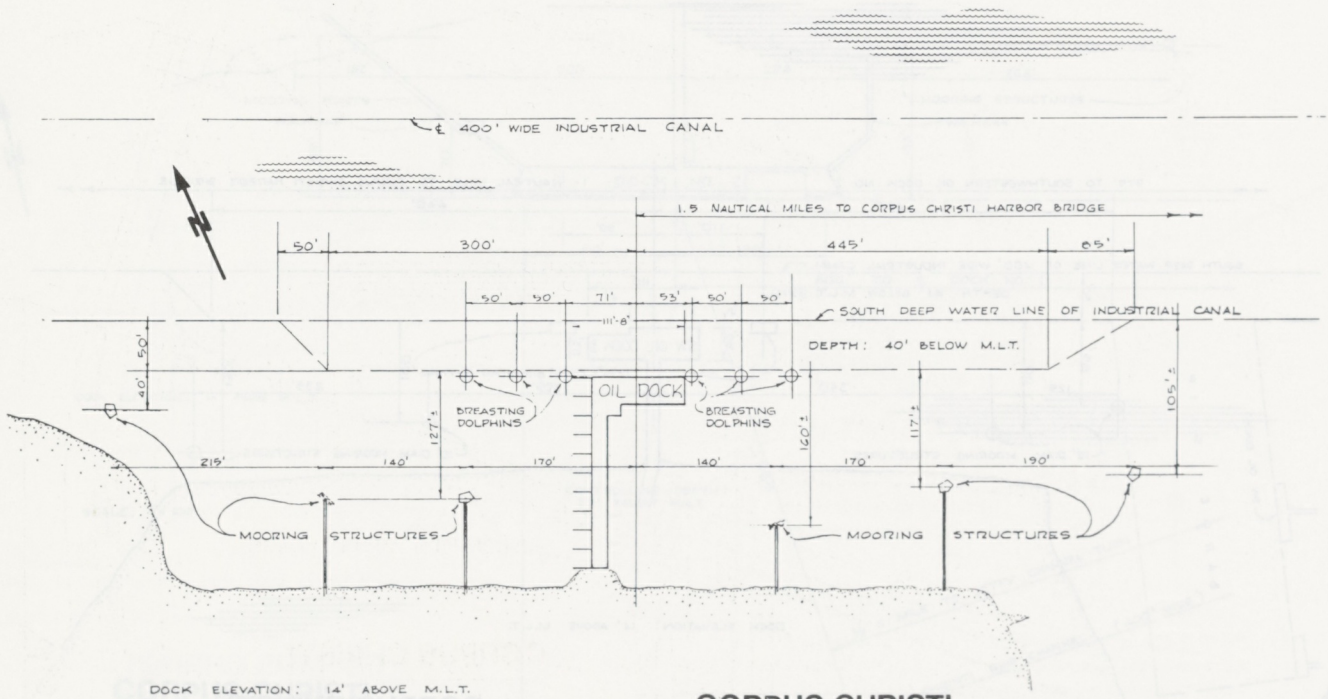
CORPUS CHRISTI

Southwestern Refining Co.
Oil Dock No.3



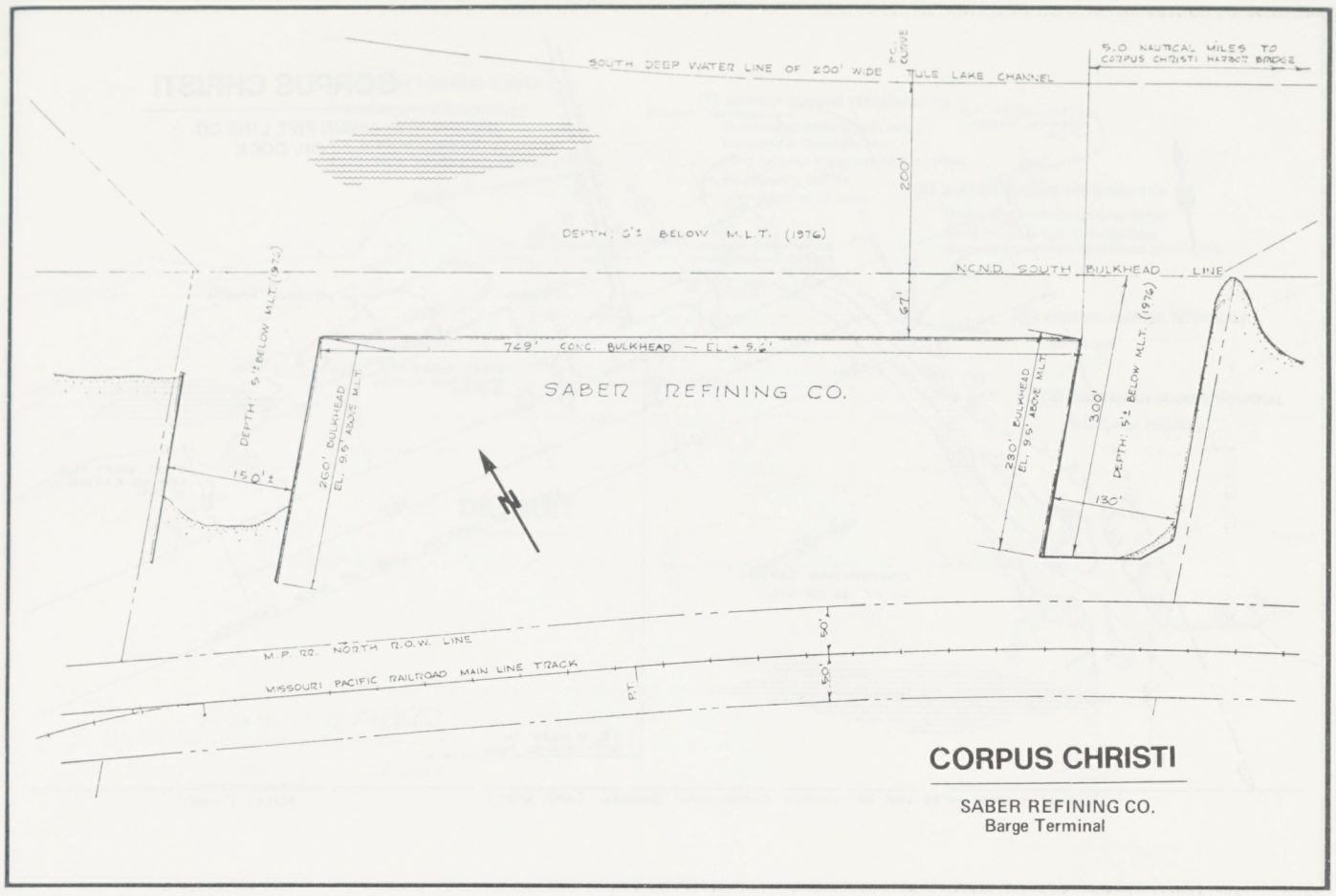
CORPUS CHRISTI

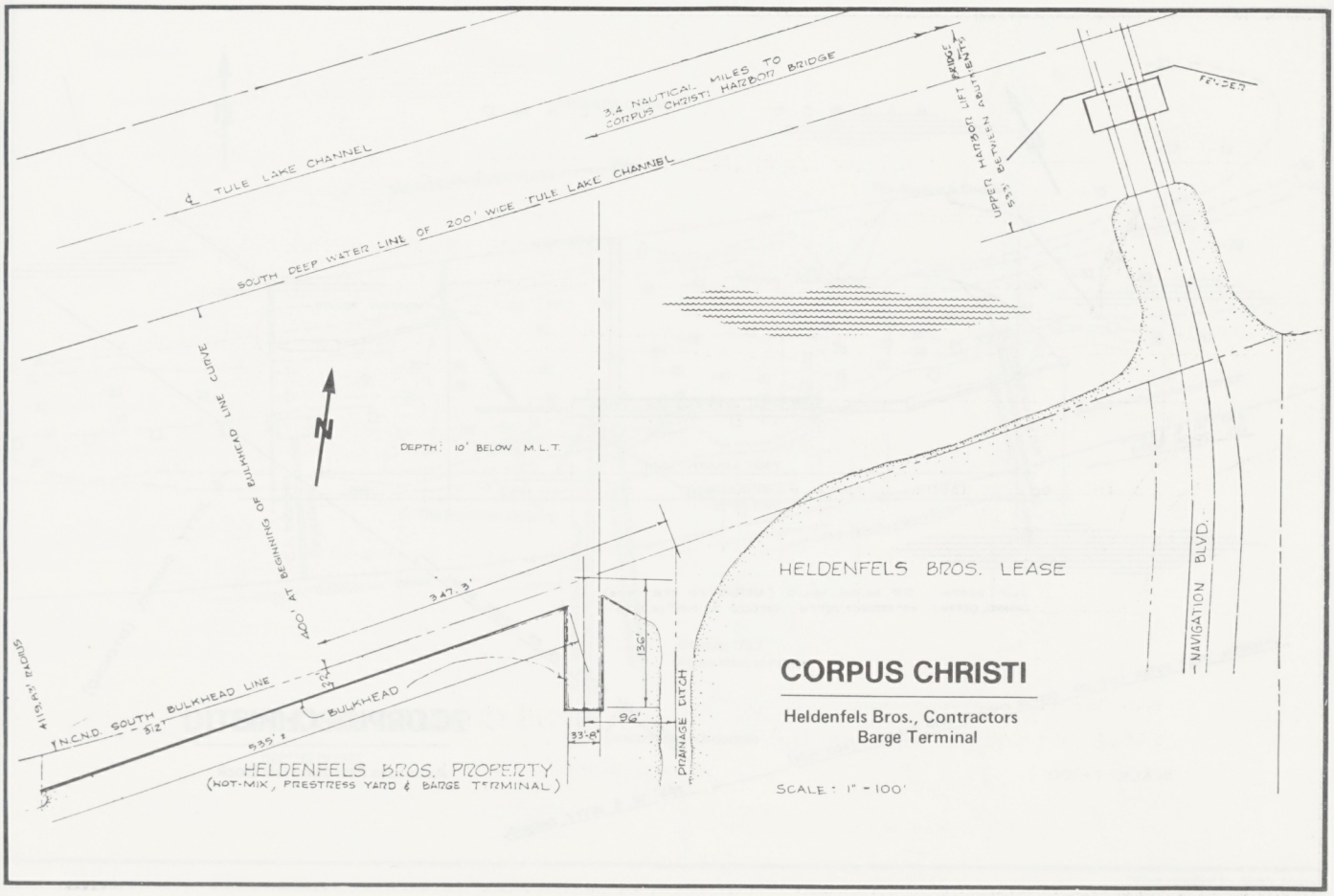
Mobil Oil Corp., Oil Dock

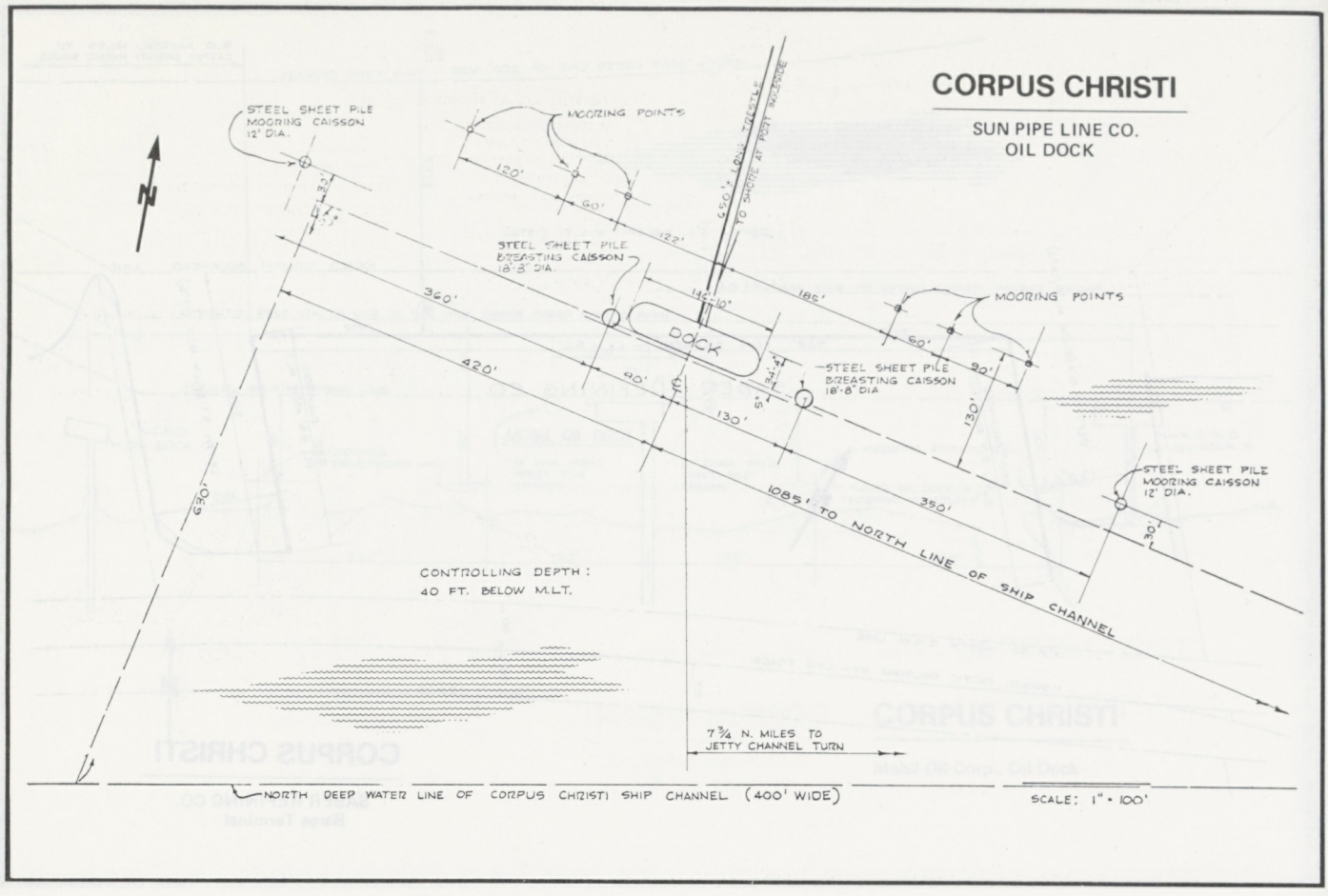


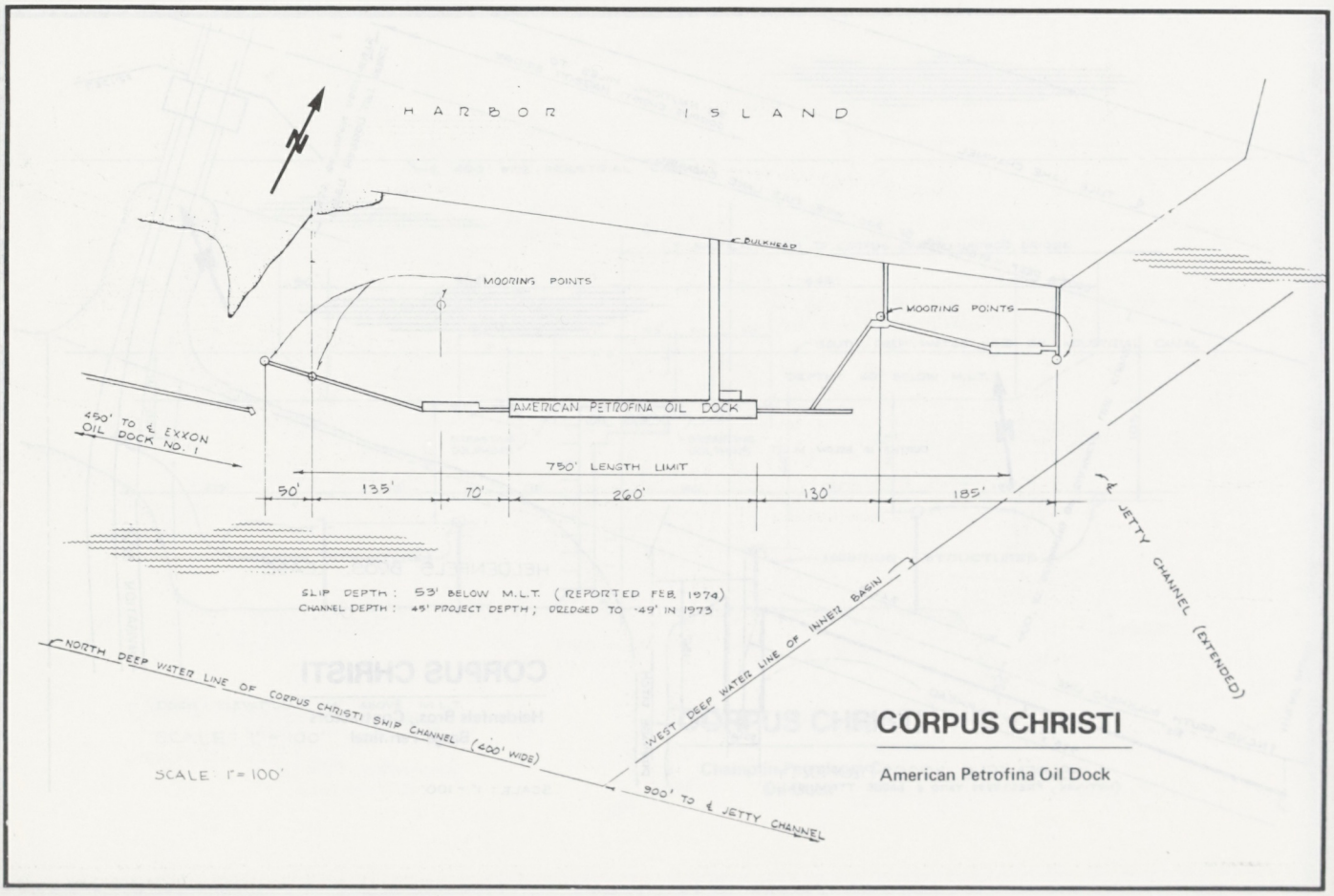
CORPUS CHRISTI

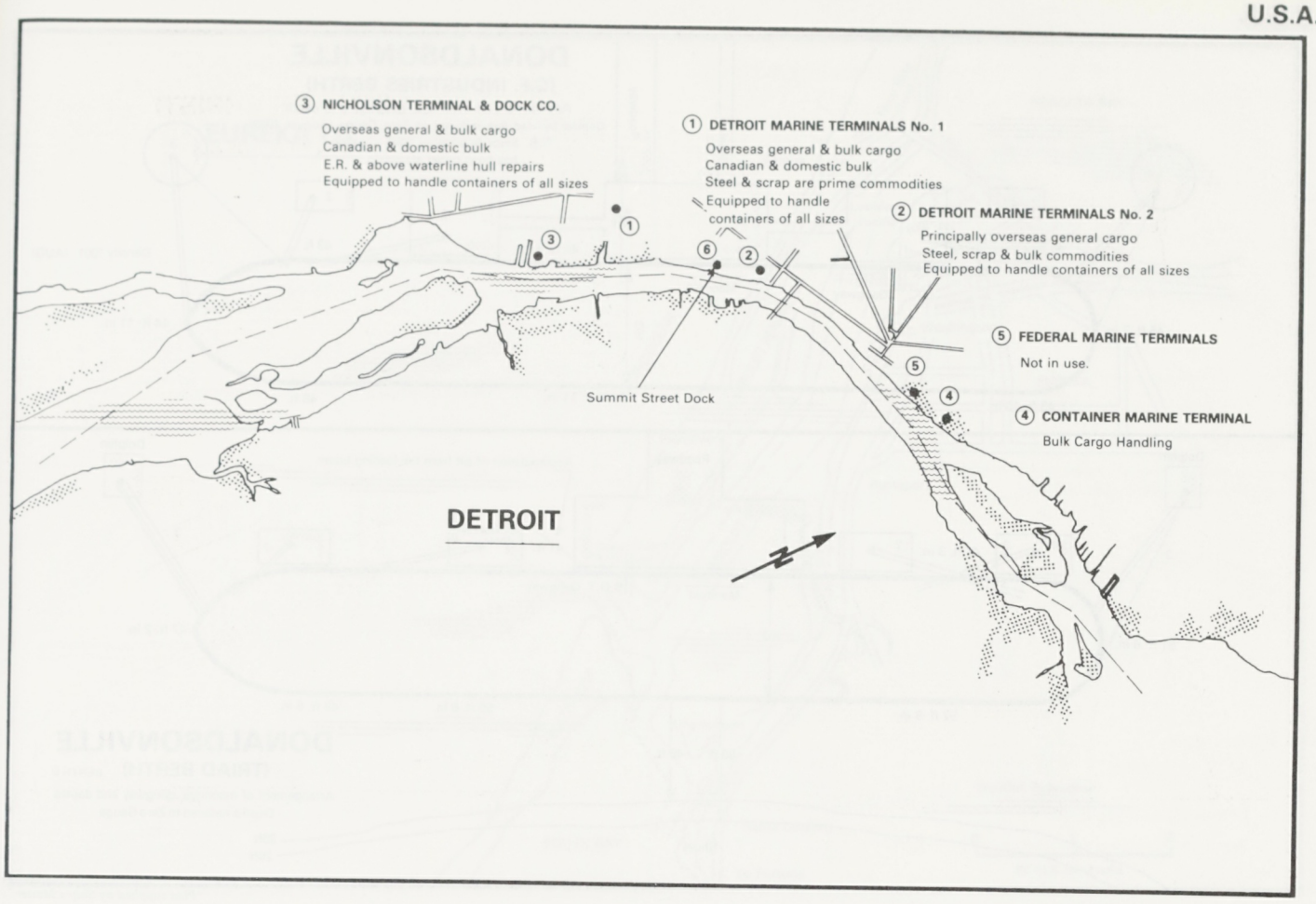
Champlin Petroleum Co.
Oil Dock

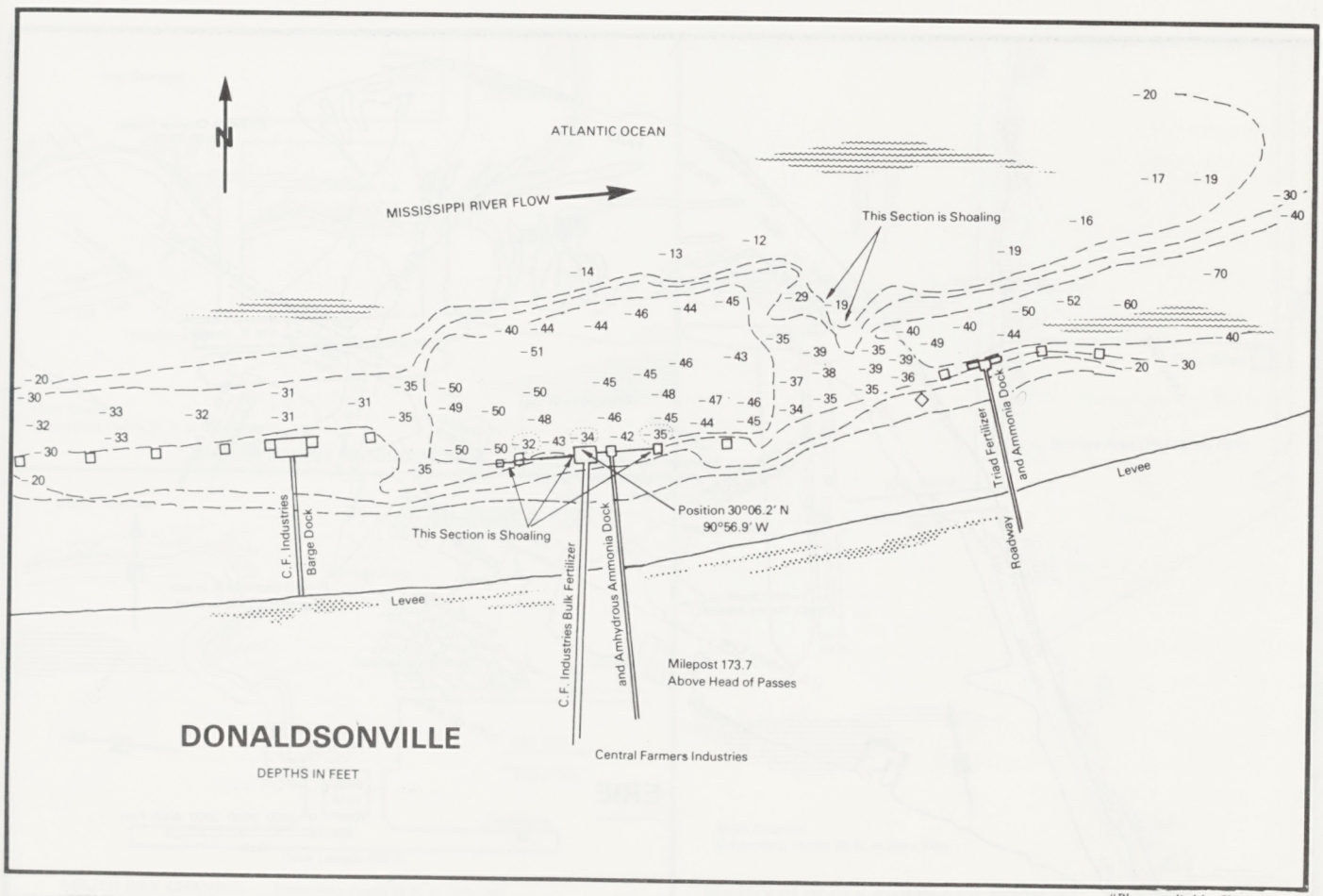

SOUTH DEEP WATER LINE OF 200' WIDE TULE LAKE CHANNEL
P.C. CURVE
5.0 NAUTICAL MILES TO CORPUS CHRISTI HARBOR BRIDGE
200'
DEPTH: 5'± BELOW M.L.T. (1976)
N.C.N.D. SOUTH BULKHEAD LINE
67'
DEPTH: 5'± BELOW M.L.T. (1976)
749' CONC. BULKHEAD — EL. + 9.5'
SABER REFINING CO.
260' BULKHEAD EL. 9.5' ABOVE M.L.T.
150'±
230' BULKHEAD EL. 9.5' ABOVE M.L.T.
300'
130'
M.P. RR. NORTH R.O.W. LINE
MISSOURI PACIFIC RAILROAD MAIN LINE TRACK
P.T.
50'
50'
CORPUS CHRISTI
SABER REFINING CO.
Barge Terminal


3.4 NAUTICAL MILES TO CORPUS CHRISTI HARBOR BRIDGE
℄ TULE LAKE CHANNEL
SOUTH DEEP WATER LINE OF 200' WIDE TULE LAKE CHANNEL
UPPER HARBOR LIFT BRIDGE
53'± BETWEEN ABUTMENTS
FERRY
DEPTH: 10' BELOW M.L.T.
400' AT BEGINNING OF BULKHEAD LINE CURVE
347.3'
136'
96'
33'-8"
HELDENFELS BROS. LEASE
NAVIGATION BLVD.
ALL RAIL TRACKS
N.C.N.D. SOUTH BULKHEAD LINE
- 5.2'
BULKHEAD
535'±
HELDENFELS BROS. PROPERTY
(HOT-MIX, PRESTRESS YARD & BARGE TERMINAL)
DRAINAGE DITCH
CORPUS CHRISTI
Heldenfels Bros., Contractors
Barge Terminal
SCALE: 1" = 100'

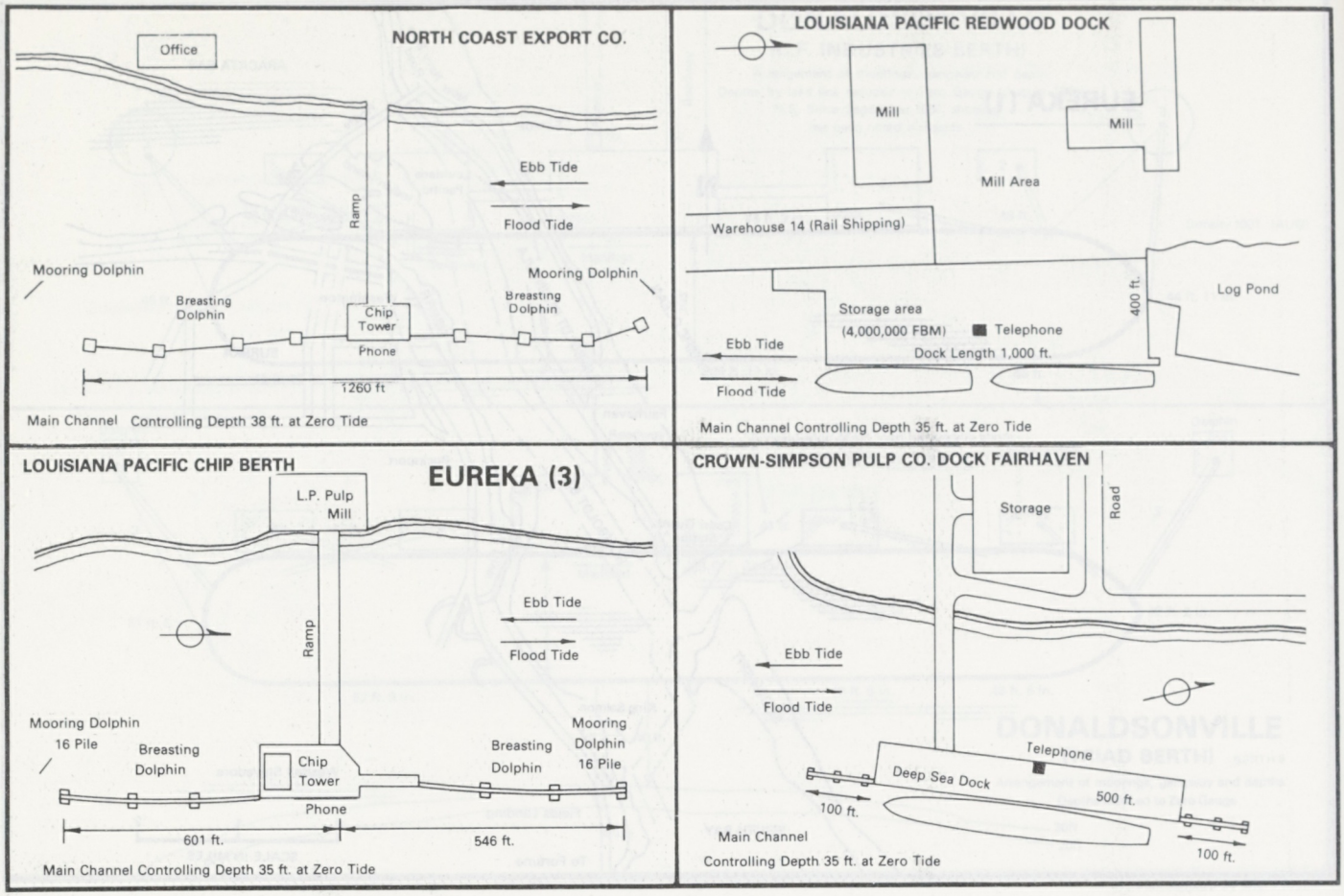

CORPUS CHRISTI
SUN PIPE LINE CO.
OIL DOCK
STEEL SHEET PILE MOORING CAISSON 12' DIA.
MOORING POINTS
120'
60'
122'
650'± LONG TRESTLE TO SHORE AT PORT ARANSAS
STEEL SHEET PILE BREASTING CAISSON 18'-8" DIA.
360'
420'
630'
DOCK
40'
130'
185'
MOORING POINTS
60'
90'
130'
STEEL SHEET PILE BREASTING CAISSON 18'-8" DIA
STEEL SHEET PILE MOORING CAISSON 12' DIA.
1085' TO NORTH LINE OF SHIP CHANNEL
350'
CONTROLLING DEPTH:
40 FT. BELOW M.L.T.
7¾ N. MILES TO JETTY CHANNEL TURN
NORTH DEEP WATER LINE OF CORPUS CHRISTI SHIP CHANNEL (400' WIDE)
SCALE: 1" = 100'

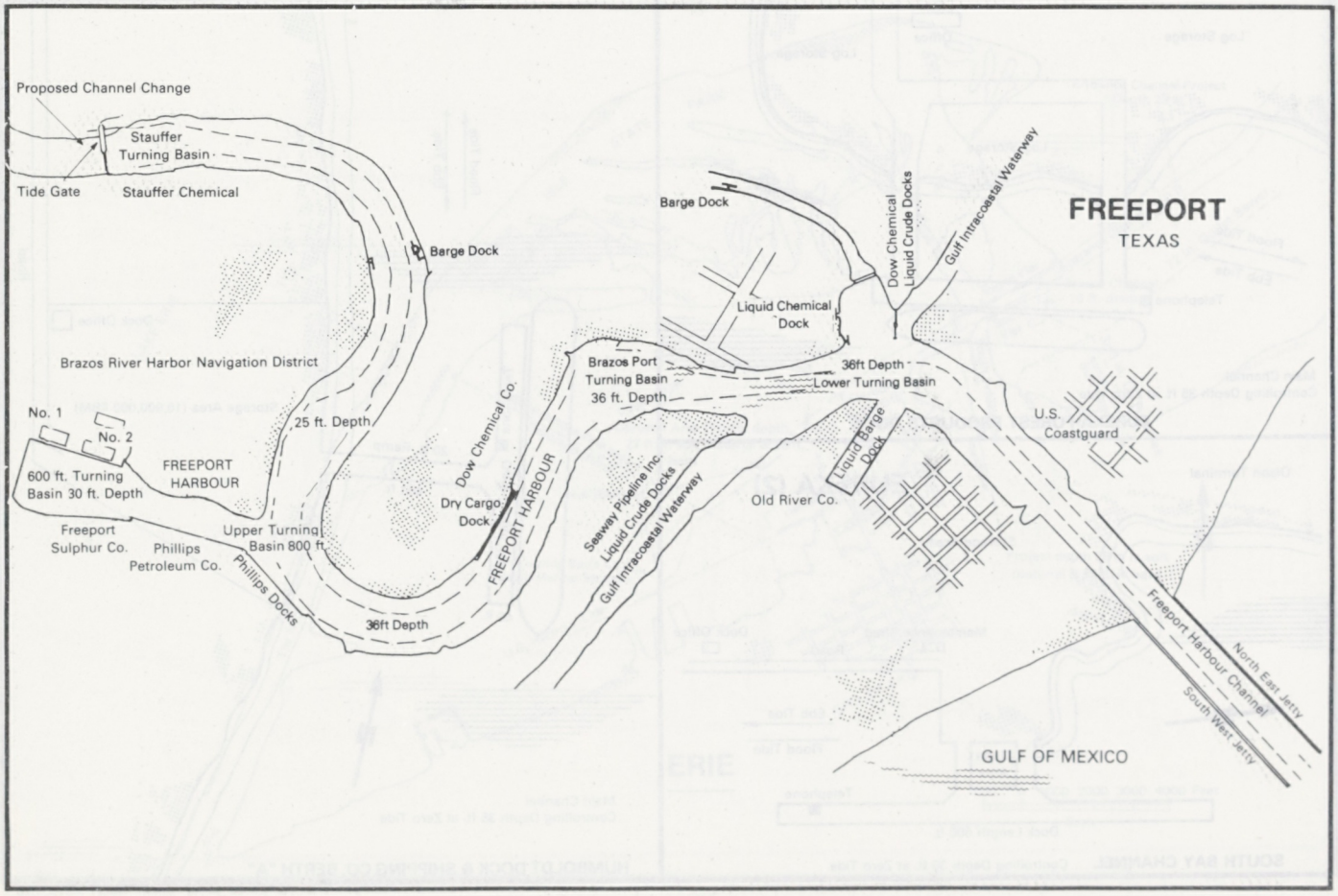

HARBOR ISLAND
BULKHEAD
MOORING POINTS
MOORING POINTS
AMERICAN PETROFINA OIL DOCK
450' TO ℄ EXXON OIL DOCK NO. 1
750' LENGTH LIMIT
50'
135'
70'
260'
130'
185'
SLIP DEPTH: 53' BELOW M.L.T. (REPORTED FEB. 1974)
CHANNEL DEPTH: 45' PROJECT DEPTH; DREDGED TO -49' IN 1973
℄ JETTY CHANNEL (EXTENDED)
WEST DEEP WATER LINE OF INNER BASIN
NORTH DEEP WATER LINE OF CORPUS CHRISTI SHIP CHANNEL (400' WIDE)
SCALE 1"= 100'
900' TO ℄ JETTY CHANNEL
CORPUS CHRISTI
American Petrofina Oil Dock

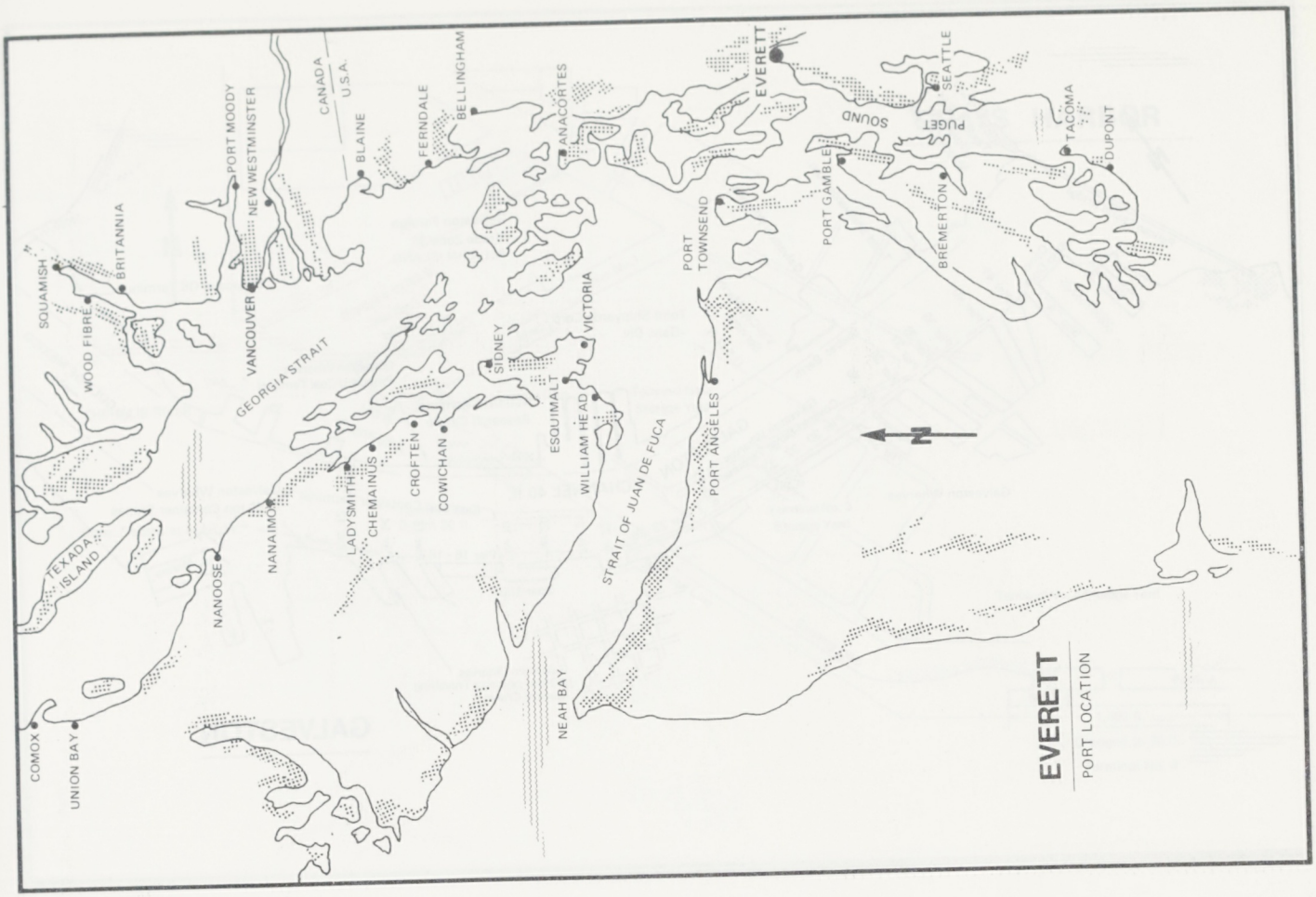


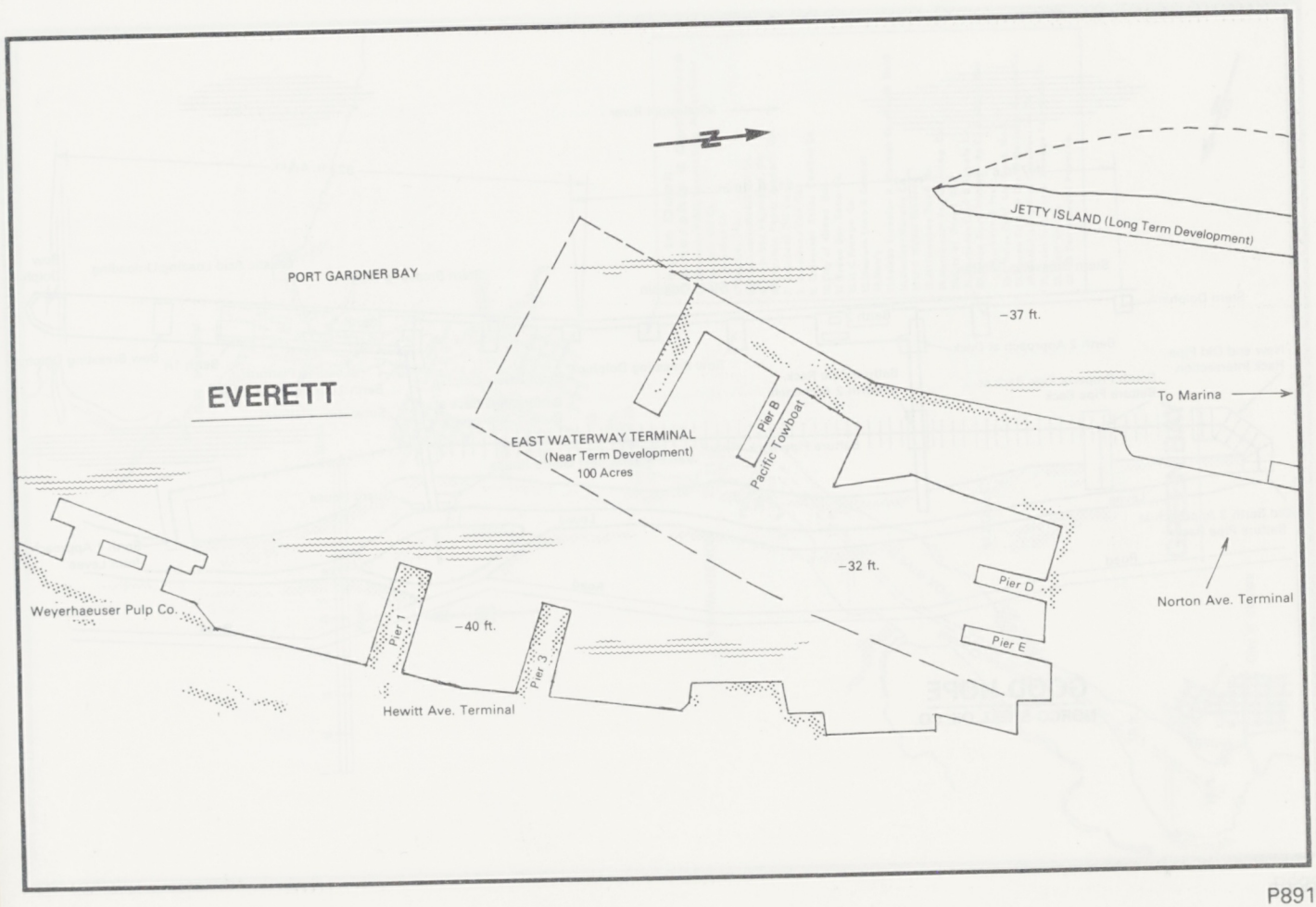


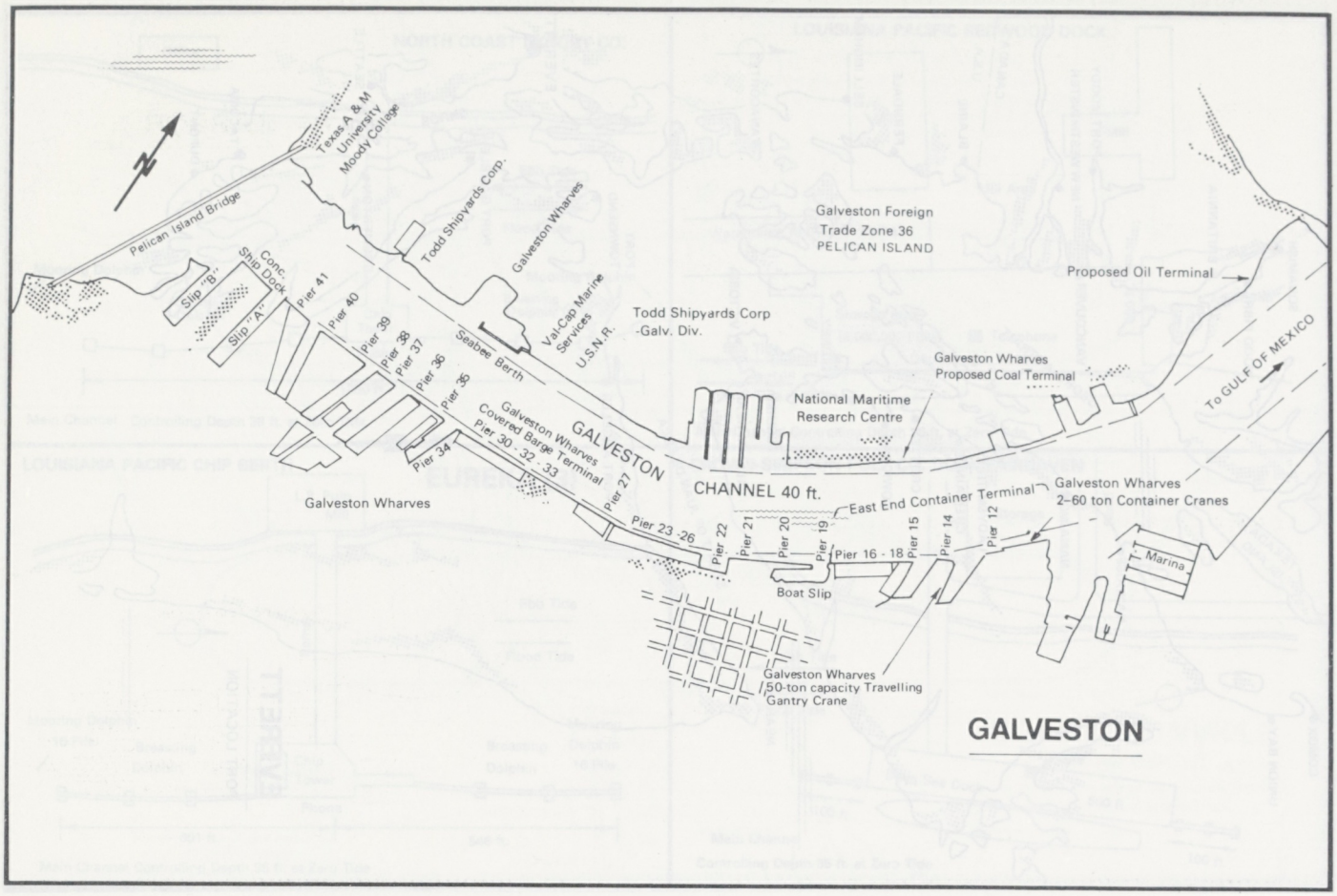
"Plan supplied by Ship's Master"


NORTH COAST EXPORT CO.
Office
Ramp
Ebb Tide
Flood Tide
Mooring Dolphin
Breasting Dolphin
Chip Tower
Phone
Mooring Dolphin
Breasting Dolphin
1260 ft
Main Channel Controlling Depth 38 ft. at Zero Tide
LOUISIANA PACIFIC REDWOOD DOCK
Mill
Mill
Mill Area
Warehouse 14 (Rail Shipping)
Storage area
(4,000,000 FBM)
Telephone
Dock Length 1,000 ft.
400 ft.
Log Pond
Ebb Tide
Flood Tide
Main Channel Controlling Depth 35 ft. at Zero Tide
LOUISIANA PACIFIC CHIP BERTH
EUREKA (3)
L.P. Pulp Mill
Ramp
Ebb Tide
Flood Tide
Mooring Dolphin 16 Pile
Breasting Dolphin
Chip Tower
Phone
Breasting Dolphin
Mooring Dolphin 16 Pile
601 ft.
546 ft.
Main Channel Controlling Depth 35 ft. at Zero Tide
CROWN-SIMPSON PULP CO. DOCK FAIRHAVEN
Storage
Road
Ebb Tide
Flood Tide
Telephone
Deep Sea Dock
500 ft.
100 ft.
Main Channel
Controlling Depth 35 ft. at Zero Tide
100 ft.

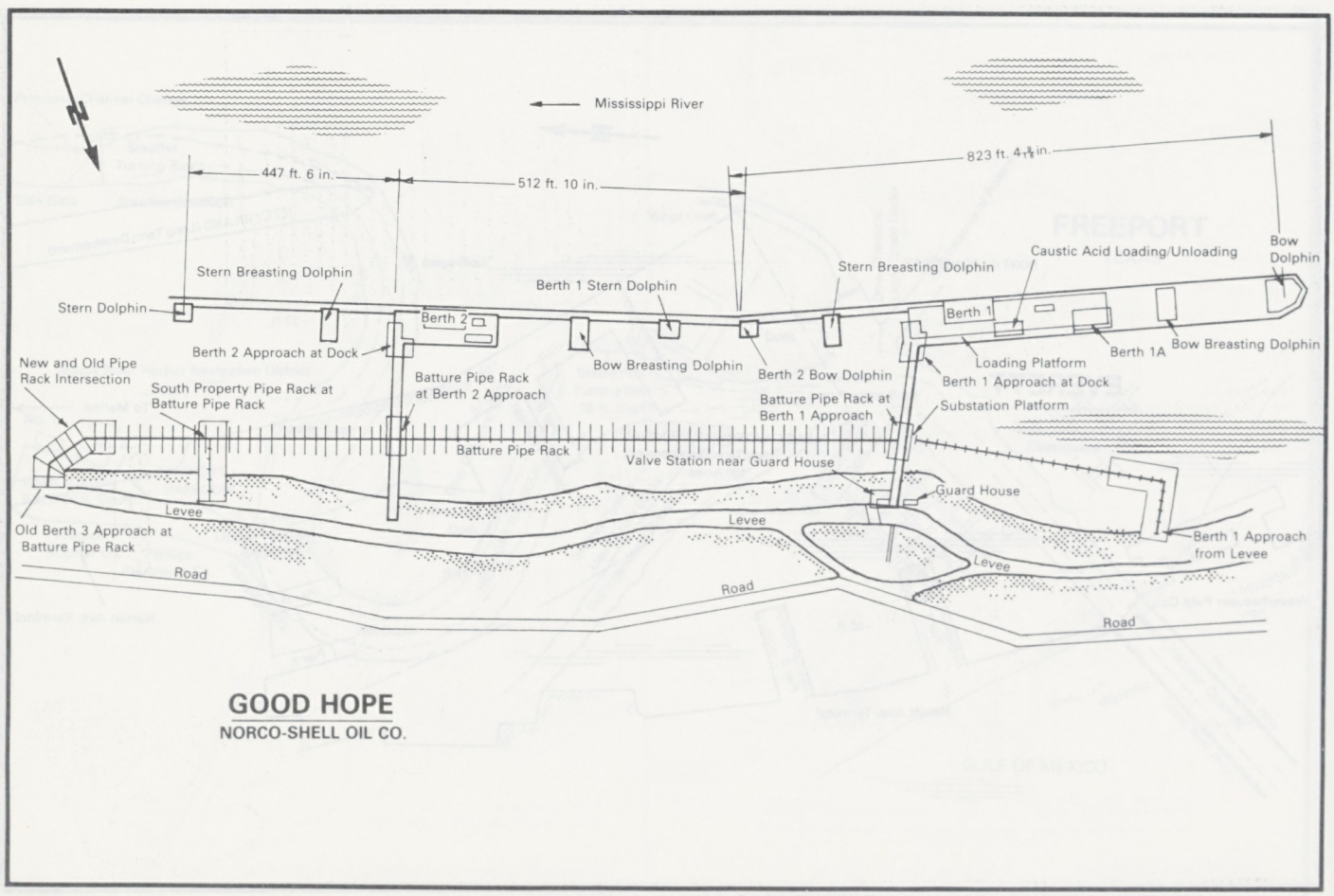

Proposed Channel Change
Stauffer Turning Basin
Tide Gate
Stauffer Chemical
Barge Dock
Brazos River Harbor Navigation District
No. 1
No. 2
600 ft. Turning Basin 30 ft. Depth
FREEPORT HARBOUR
25 ft. Depth
Freeport Sulphur Co.
Phillips Petroleum Co.
Upper Turning Basin 800 ft.
Phillips Docks
36ft Depth
Dow Chemical Co.
Dry Cargo Dock
FREEPORT HARBOUR
Barge Dock
Dow Chemical Liquid Crude Docks
Gulf Intracoastal Waterway
FREEPORT
TEXAS
Liquid Chemical Dock
Brazos Port Turning Basin
36 ft. Depth
36ft Depth
Lower Turning Basin
U.S. Coastguard
Liquid Barge Dock
Old River Co.
Seaway Pipeline Inc. Liquid Crude Docks
Gulf Intracoastal Waterway
Freeport Harbour Channel
North East Jetty
South West Jetty
GULF OF MEXICO


SQUAMISH
BRITANNIA
WOOD FIBRE
PORT MOODY
NEW WESTMINSTER
VANCOUVER
CANADA
U.S.A.
BLAINE
FERNDALE
BELLINGHAM
ANACORTES
EVERETT
SEATTLE
PUGET SOUND
TACOMA
DUPONT
PORT GAMBLE
BREMERTON
PORT TOWNSEND
GEORGIA STRAIT
SIDNEY
VICTORIA
ESQUIMALT
WILLIAM HEAD
STRAIT OF JUAN DE FUCA
PORT ANGELES
TEXADA ISLAND
NANOOSE
NANAIMO
LADYSMITH
CHEMAINUS
CROFTEN
COWICHAN
NEAH BAY
COMOX
UNION BAY
N
EVERETT
PORT LOCATION


N
JETTY ISLAND (Long Term Development)
PORT GARDNER BAY
EVERETT
–37 ft.
To Marina
EAST WATERWAY TERMINAL
(Near Term Development)
100 Acres
Pier B
Pacific Towboat
–32 ft.
Pier D
Pier E
Norton Ave. Terminal
Weyerhaeuser Pulp Co.
Pier 1
–40 ft.
Pier 3
Hewitt Ave. Terminal

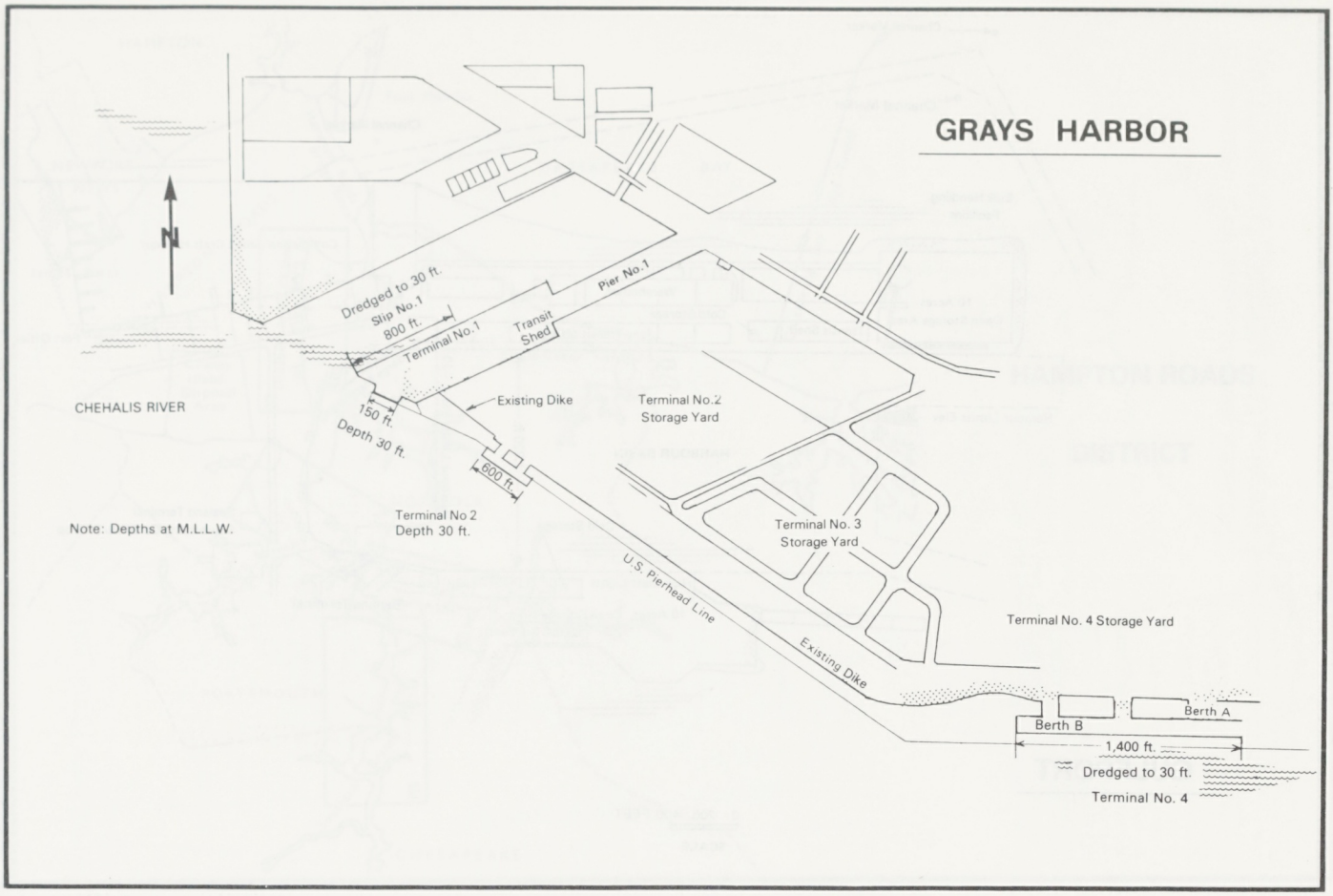


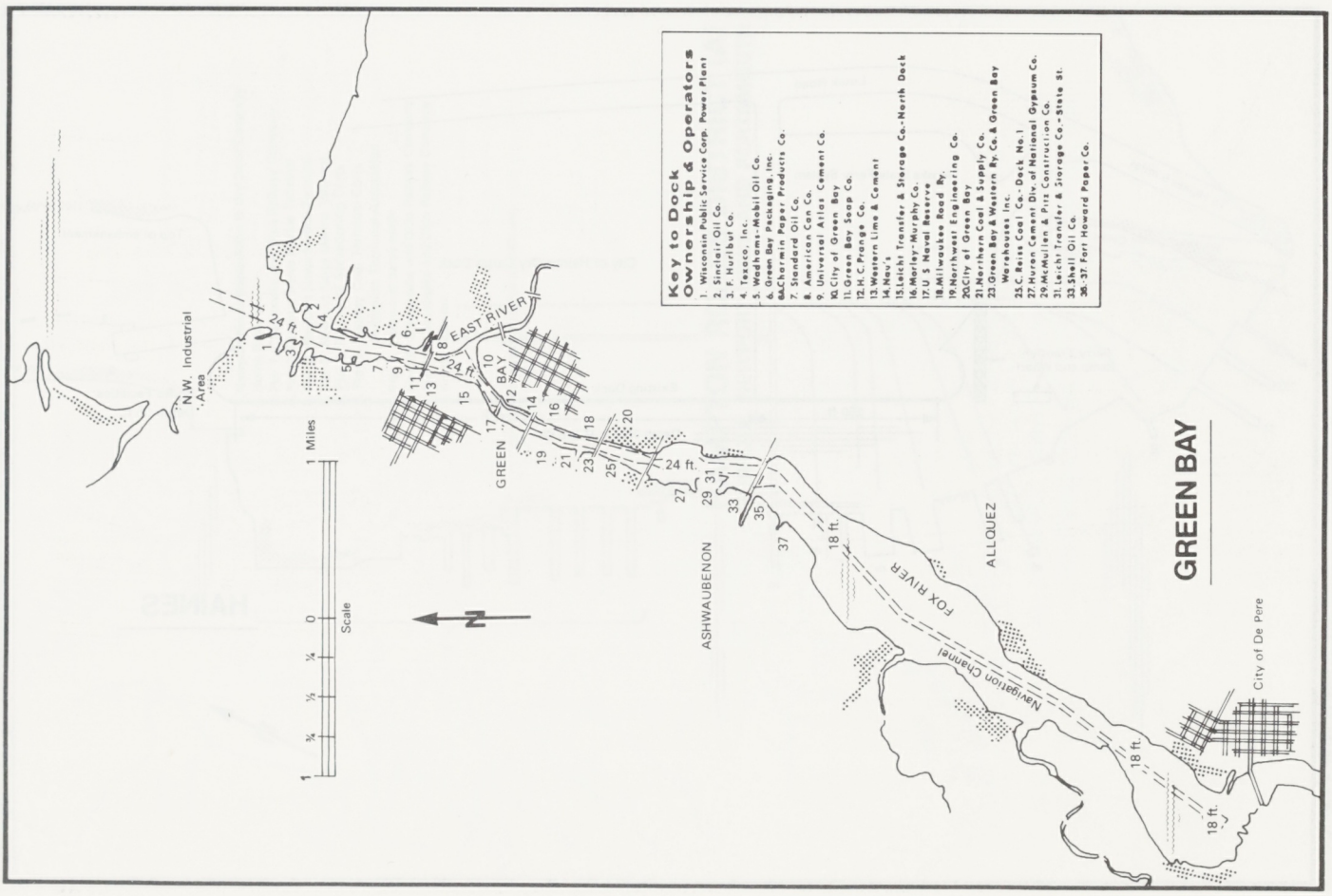
GALVESTON

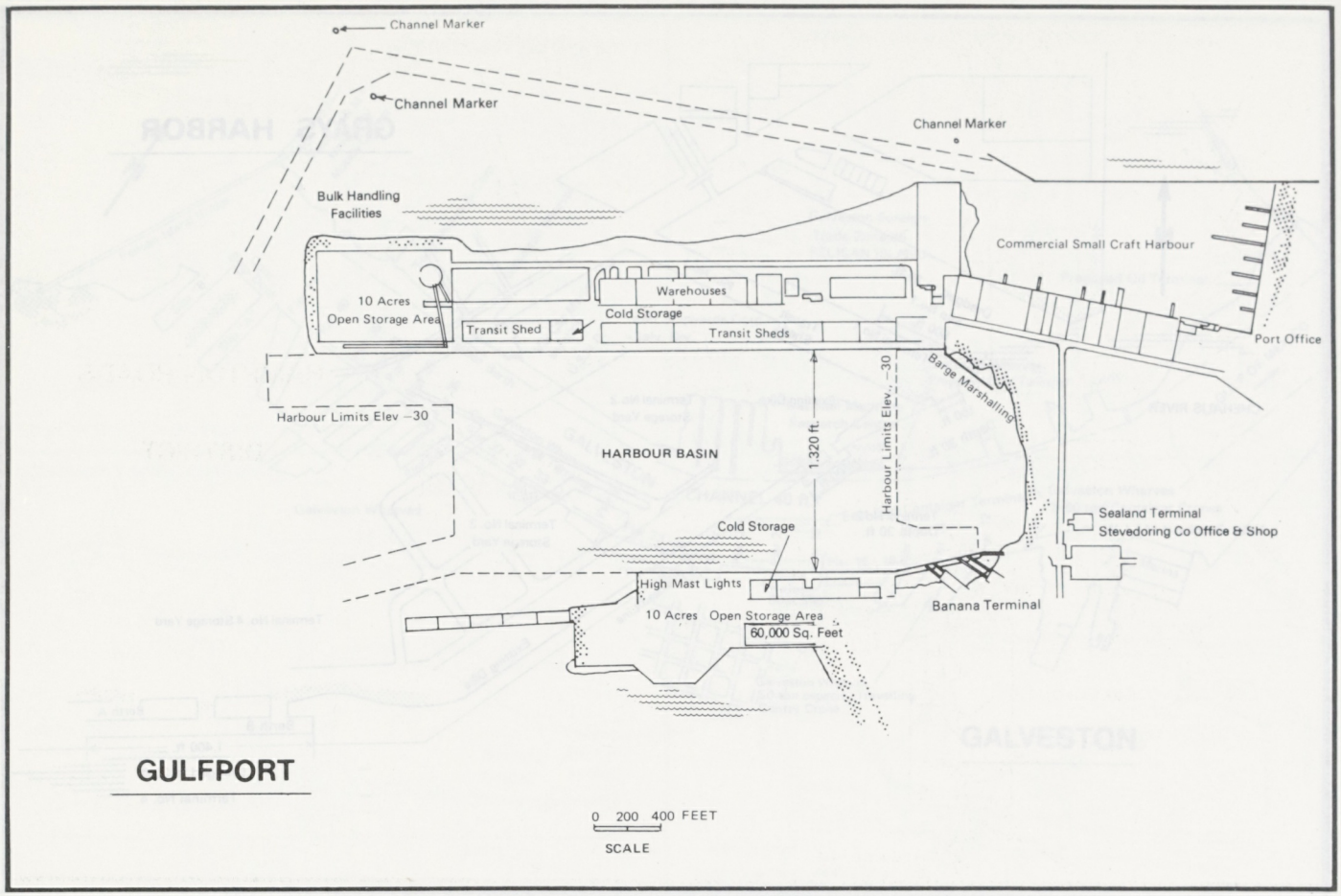


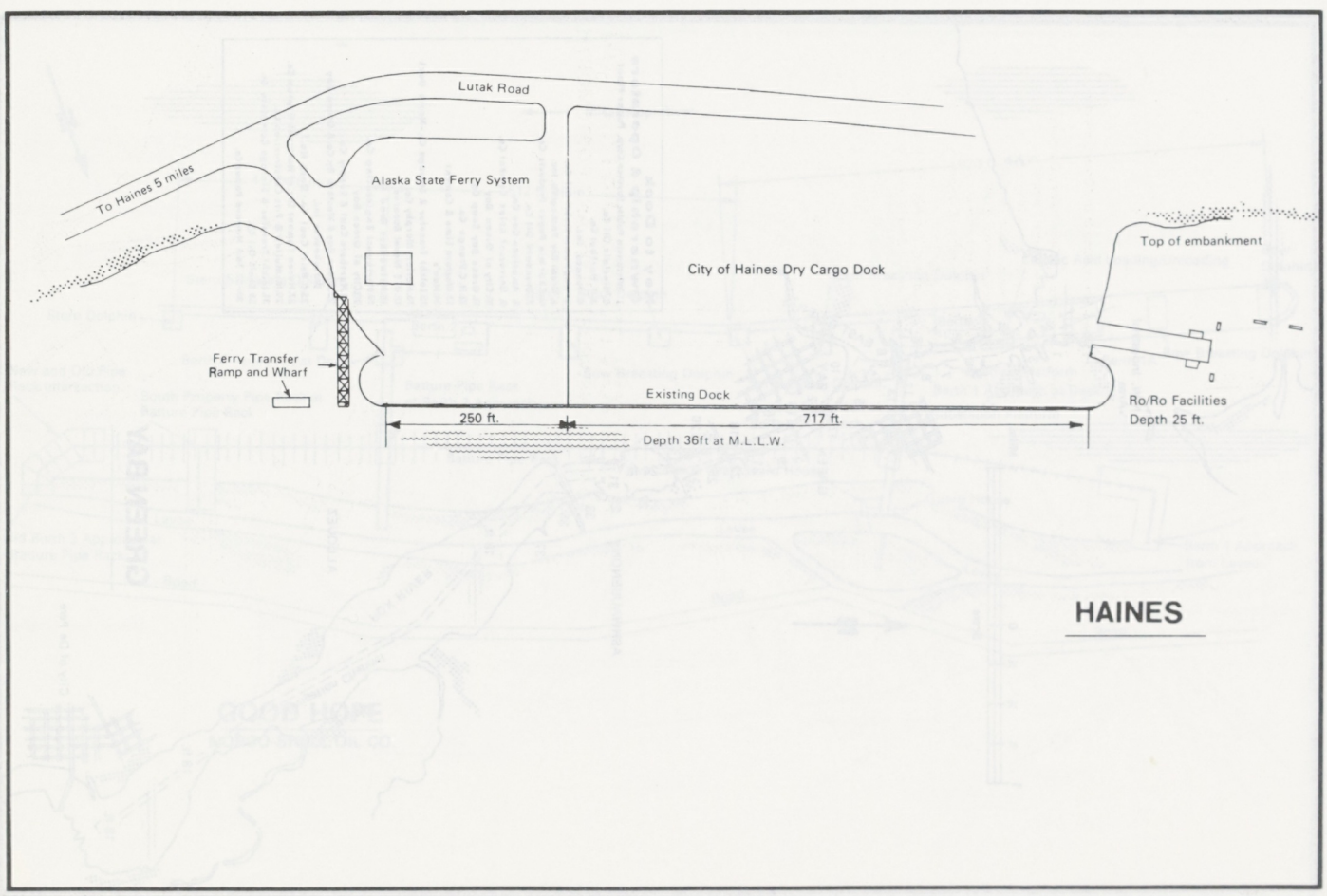
GOOD HOPE

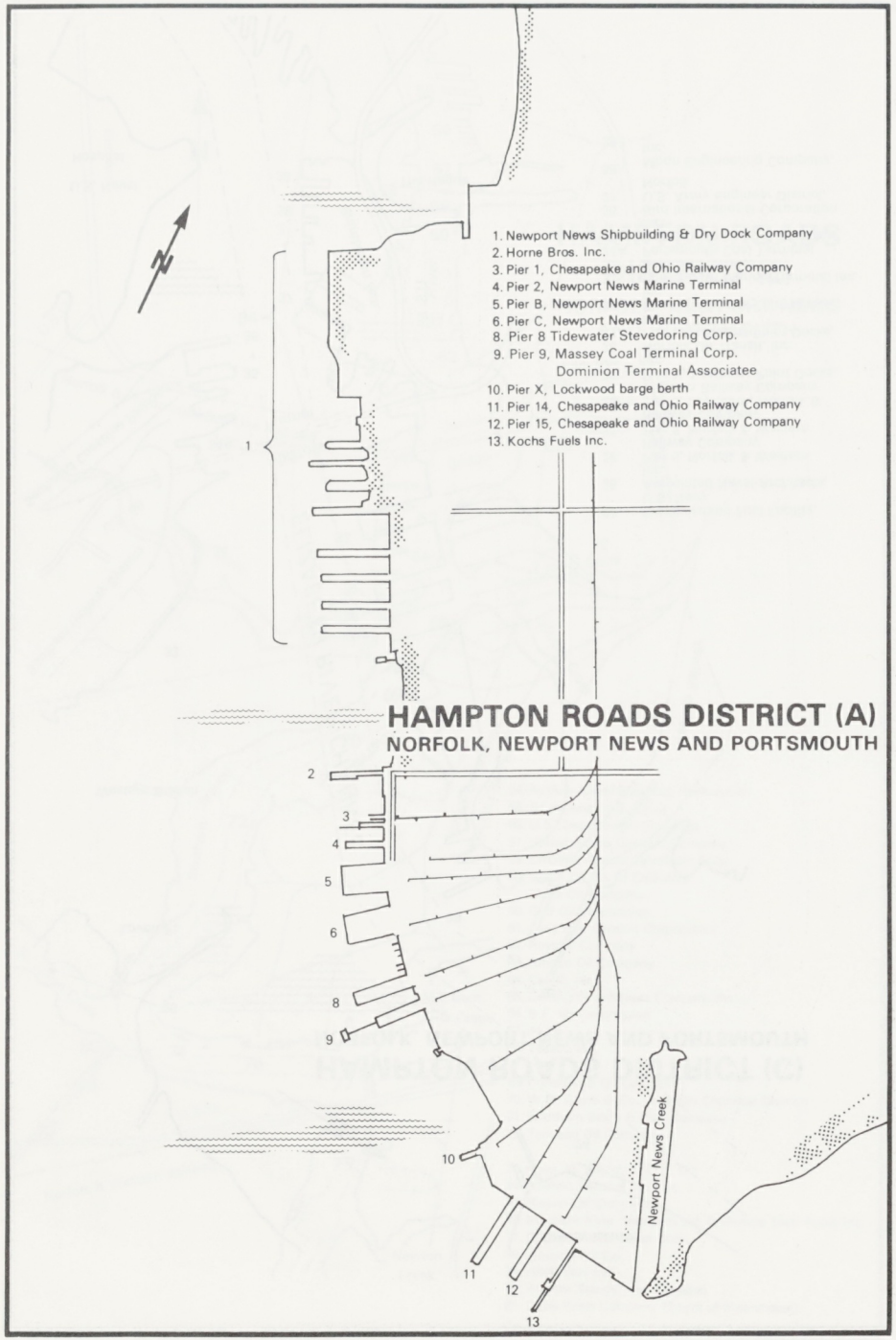
NORCO-SHELL OIL CO.

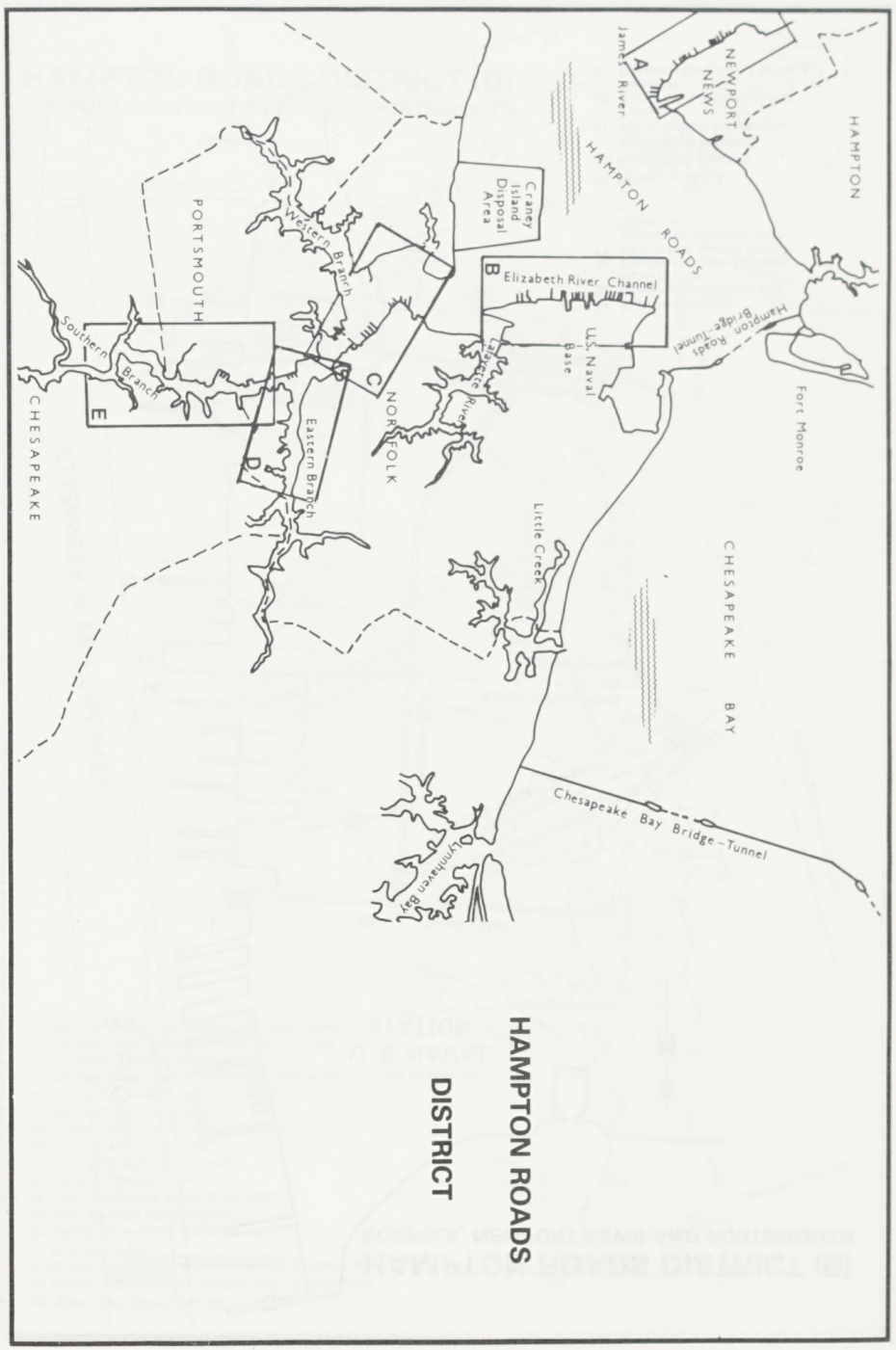

GRAYS HARBOR
N
Dredged to 30 ft.
Slip No.1
800 ft.
Terminal No.1
Transit Shed
Pier No.1
CHEHALIS RIVER
150 ft.
Depth 30 ft.
Existing Dike
Terminal No.2
Storage Yard
600 ft.
Note: Depths at M.L.L.W.
Terminal No 2
Depth 30 ft.
Terminal No. 3
Storage Yard
U.S. Pierhead Line
Existing Dike
Terminal No. 4 Storage Yard
Berth B
Berth A
1,400 ft.
Dredged to 30 ft.
Terminal No. 4

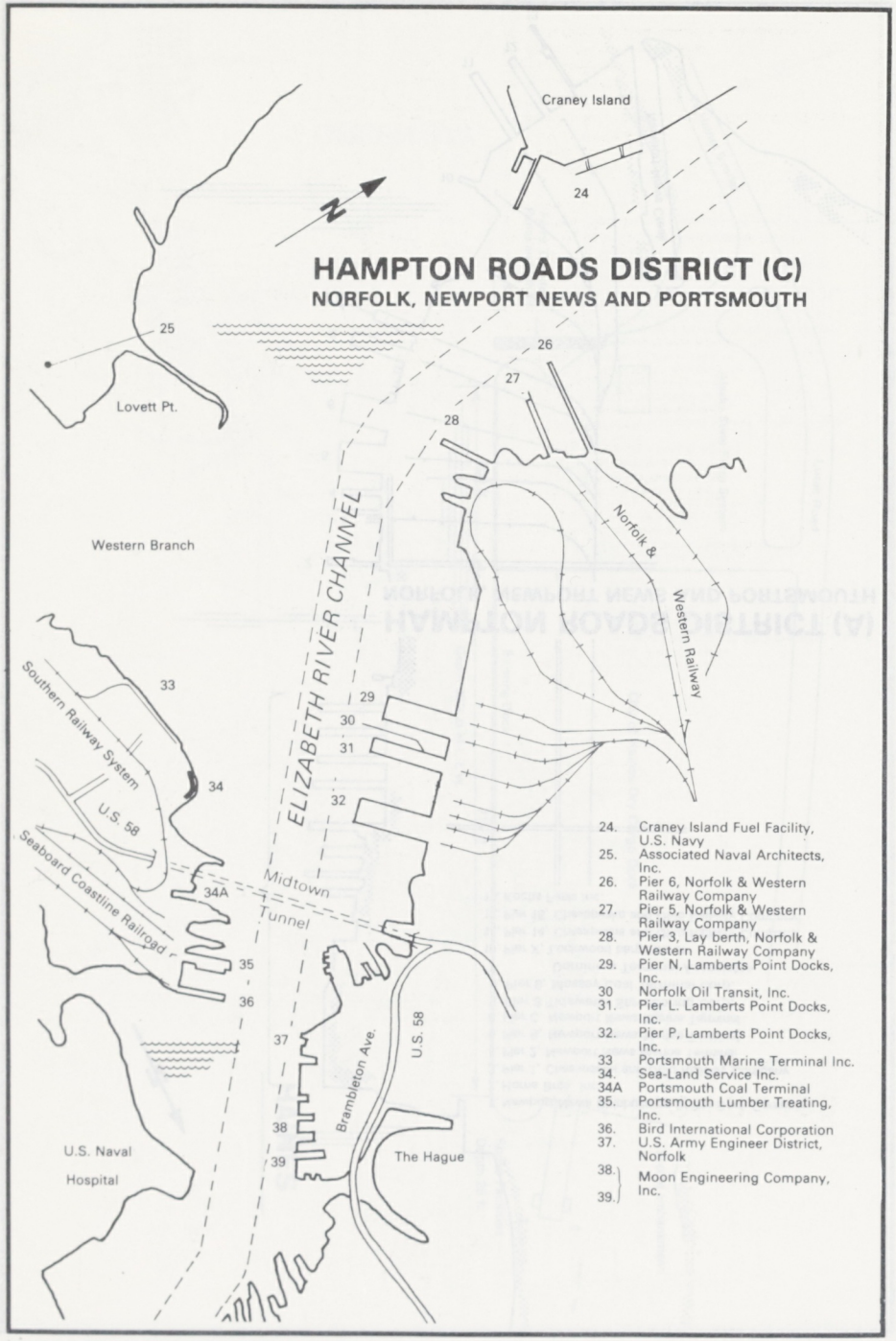

Key to Dock Ownership & Operators
1. Wisconsin Public Service Corp. Power Plant
2. Sinclair Oil Co.
3. F. Hurlbut Co.
4. Texaco, Inc.
5. Weyhaus-Mobil Oil Co.
6. Green Bay Packaging, Inc
6a. Scharmin Paper Products Co.
7. Standard Oil Co.
8. American Can Co.
9. Universal Atlas Cement Co.
10. City of Green Bay
11. Green Bay Soap Co.
12. H. C. Prange Co.
13. Western Lime & Cement
14. Navy
15. Leichi Transfer & Storage Co.-North Dock
16. Morley-Murphy Co.
17. U. S. Naval Reserve
18. Milwaukee Road Ry.
19. Northwest Engineering Co.
20. City of Green Bay
21. Northern Coal & Supply Co.
23. Green Bay & Western Ry. Co. & Green Bay Warehouses Inc.
25. C. Reiss Coal Co.-Dock No. 1
27. Huron Cement Div. of National Gypsum Co.
29. McMullen & Pitz Construction Co.
31. Leichi Transfer & Storage Co.-State St.
33. Shell Oil Co.
36.-37. Fort Howard Paper Co.
GREEN BAY
N.W. Industrial Area
24 ft.
EAST RIVER
GREEN BAY
ASHWAUBENON
ALLOUEZ
FOX RIVER
Navigation Channel
18 ft.
City of De Pere
1 Miles
Scale
N

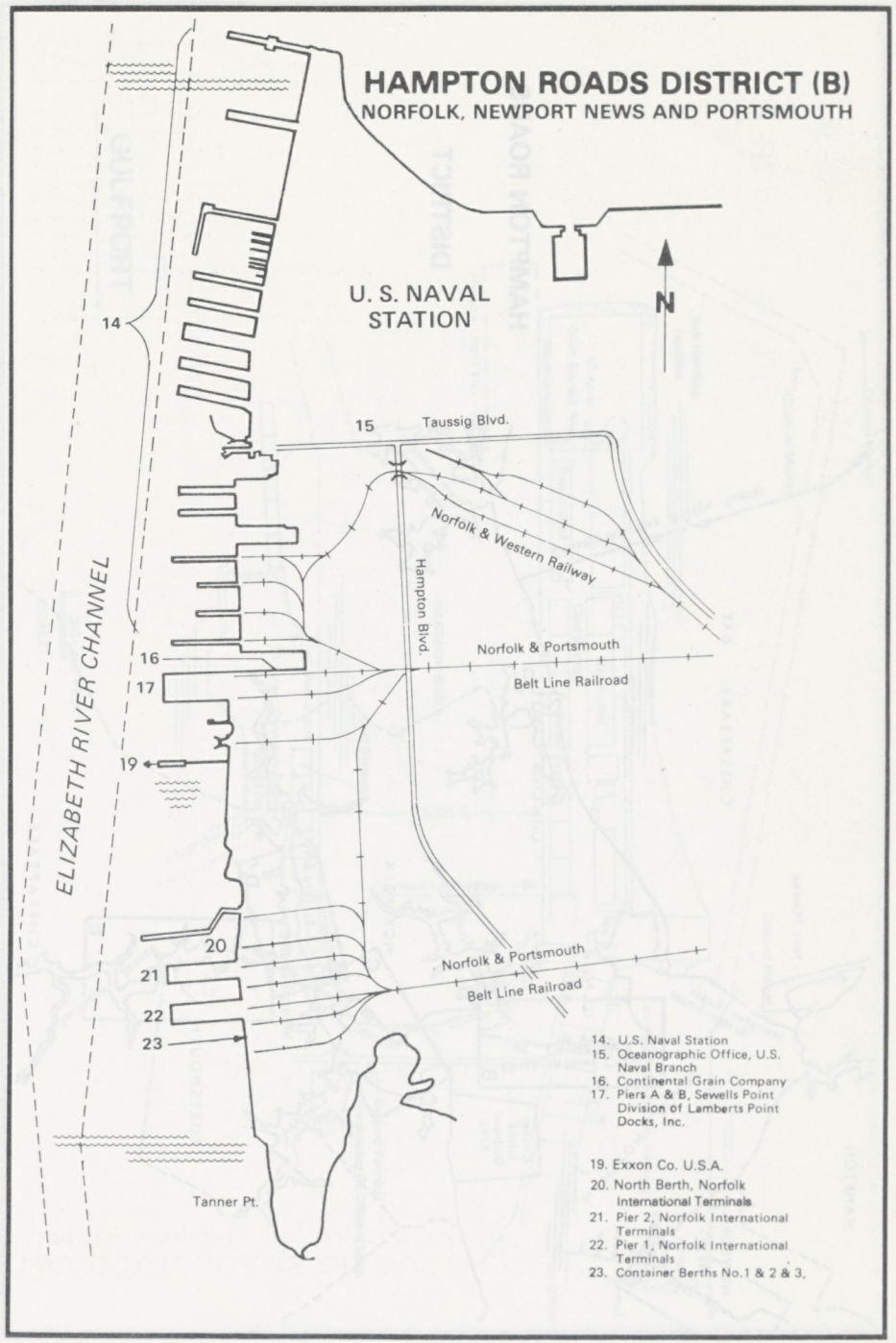

Channel Marker
Channel Marker
Channel Marker
Bulk Handling Facilities
Commercial Small Craft Harbour
10 Acres Open Storage Area
Warehouses
Cold Storage
Transit Shed
Transit Sheds
Port Office
Harbour Limits Elev –30
HARBOUR BASIN
1,320 ft.
Harbour Limits Elev. –30
Barge Marshalling
Sealand Terminal
Stevedoring Co Office & Shop
Cold Storage
High Mast Lights
Banana Terminal
10 Acres Open Storage Area
60,000 Sq. Feet
GULFPORT
0 200 400 FEET
SCALE

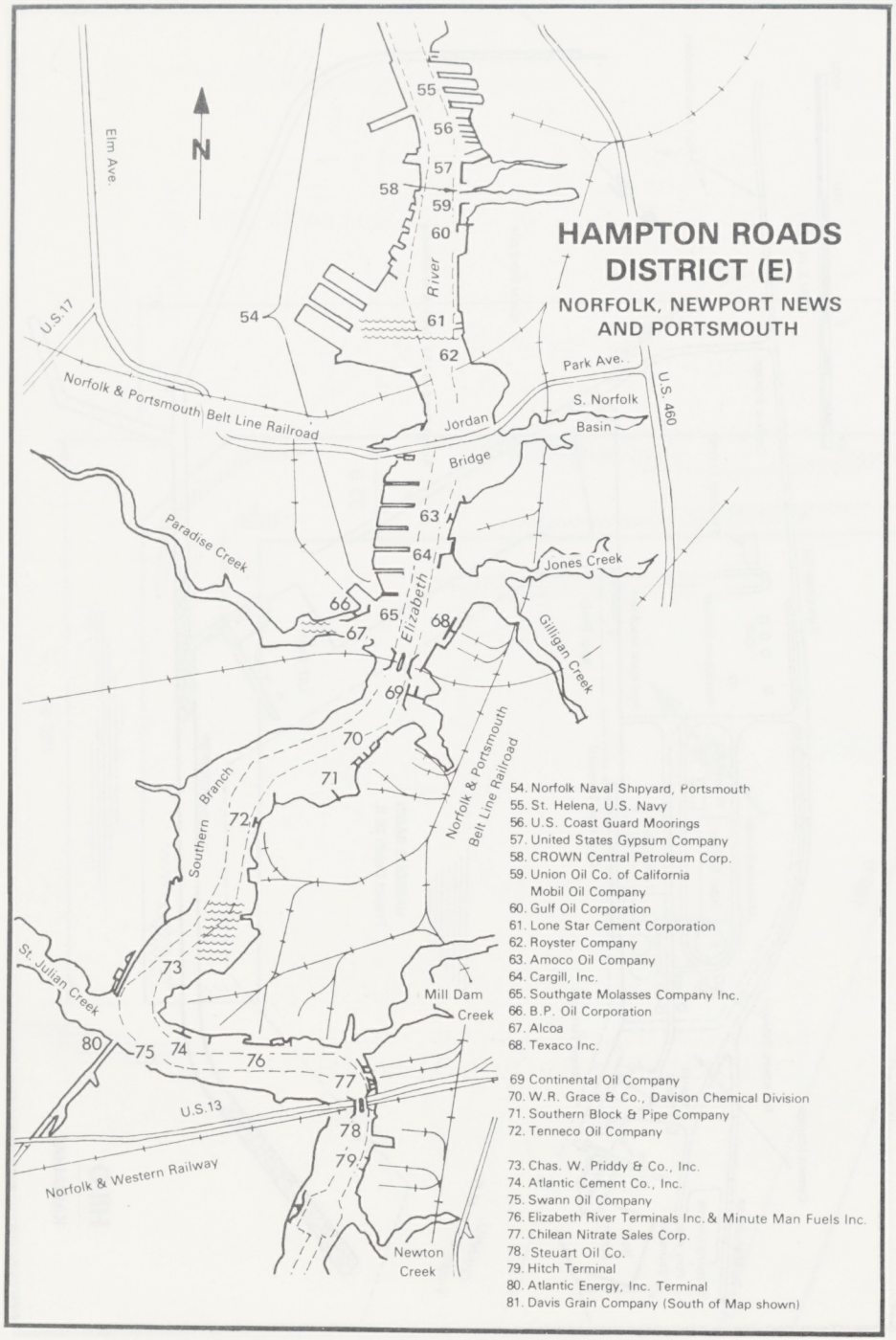

Lutak Road
To Haines 5 miles
Alaska State Ferry System
City of Haines Dry Cargo Dock
Top of embankment
Ferry Transfer Ramp and Wharf
Existing Dock
250 ft.
717 ft.
Depth 36ft at M.L.L.W.
Ro/Ro Facilities Depth 25 ft.
HAINES

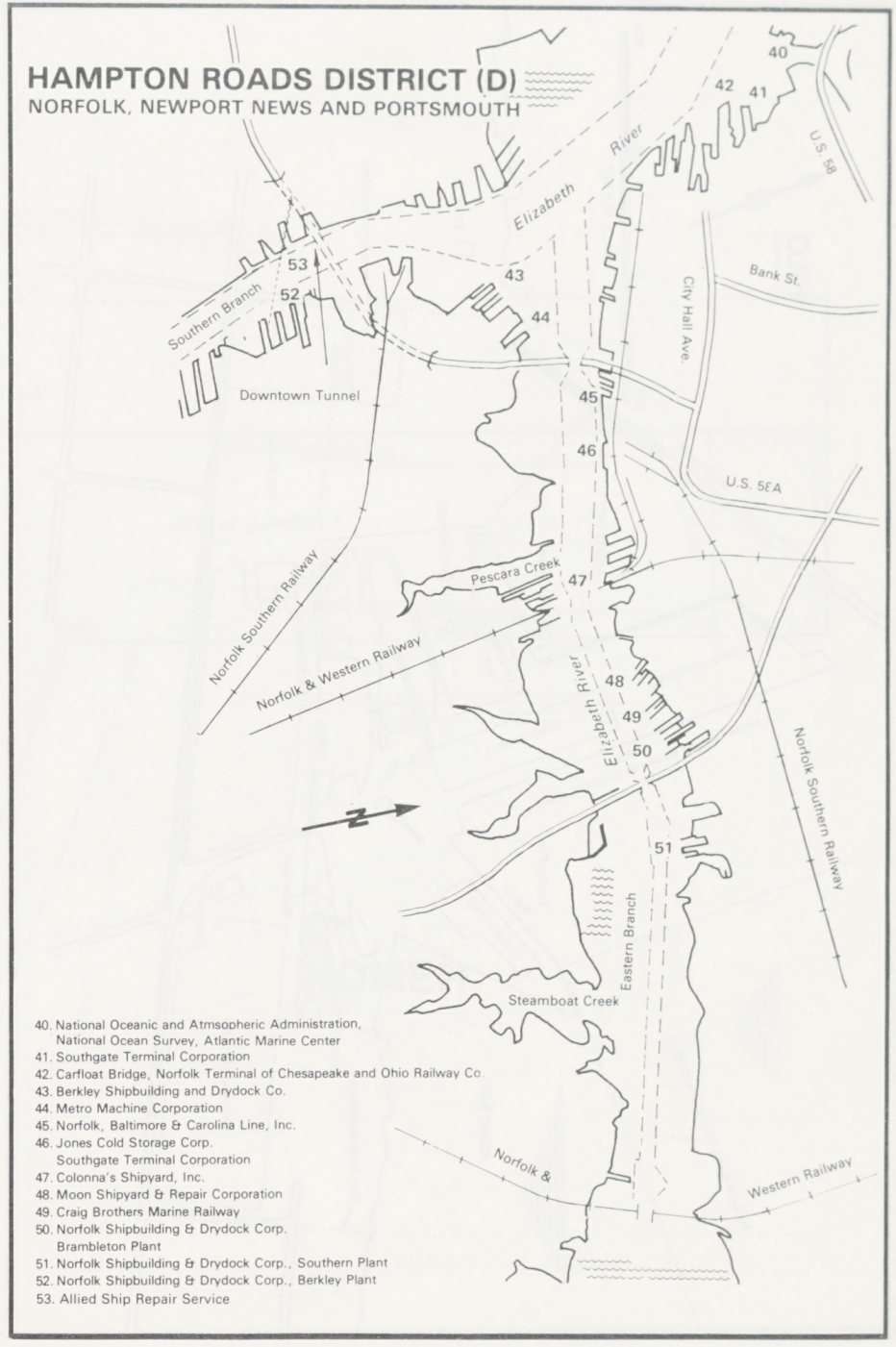

1. Newport News Shipbuilding & Dry Dock Company
2. Horne Bros. Inc.
3. Pier 1, Chesapeake and Ohio Railway Company
4. Pier 2, Newport News Marine Terminal
5. Pier B, Newport News Marine Terminal
6. Pier C, Newport News Marine Terminal
8. Pier 8 Tidewater Stevedoring Corp.
9. Pier 9, Massey Coal Terminal Corp.
Dominion Terminal Associatee
10. Pier X, Lockwood barge berth
11. Pier 14, Chesapeake and Ohio Railway Company
12. Pier 15, Chesapeake and Ohio Railway Company
13. Kochs Fuels Inc.
HAMPTON ROADS DISTRICT (A)
NORFOLK, NEWPORT NEWS AND PORTSMOUTH
Newport News Creek

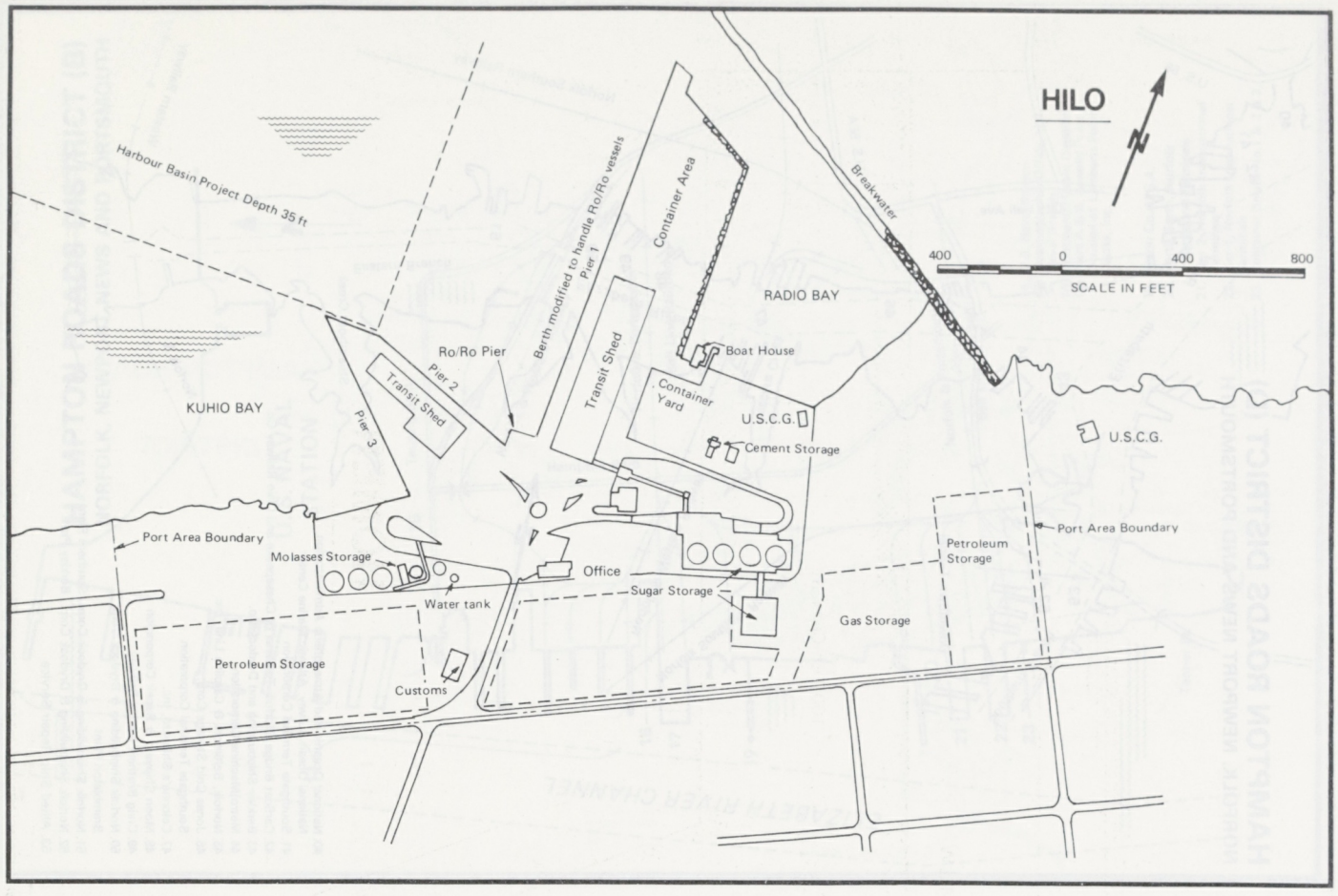

HAMPTON ROADS DISTRICT
U.S.A.
James River
NEWPORT NEWS
HAMPTON
HAMPTON ROADS
Craney Island Disposal Area
PORTSMOUTH
Western Branch
Elizabeth River Channel
Hampton Roads Bridge-Tunnel
Southern Branch
Eastern Branch
U.S. Naval Base
Fort Monroe
CHESAPEAKE
NORFOLK
Little Creek
CHESAPEAKE BAY
Chesapeake Bay Bridge-Tunnel
Lynnhaven Bay

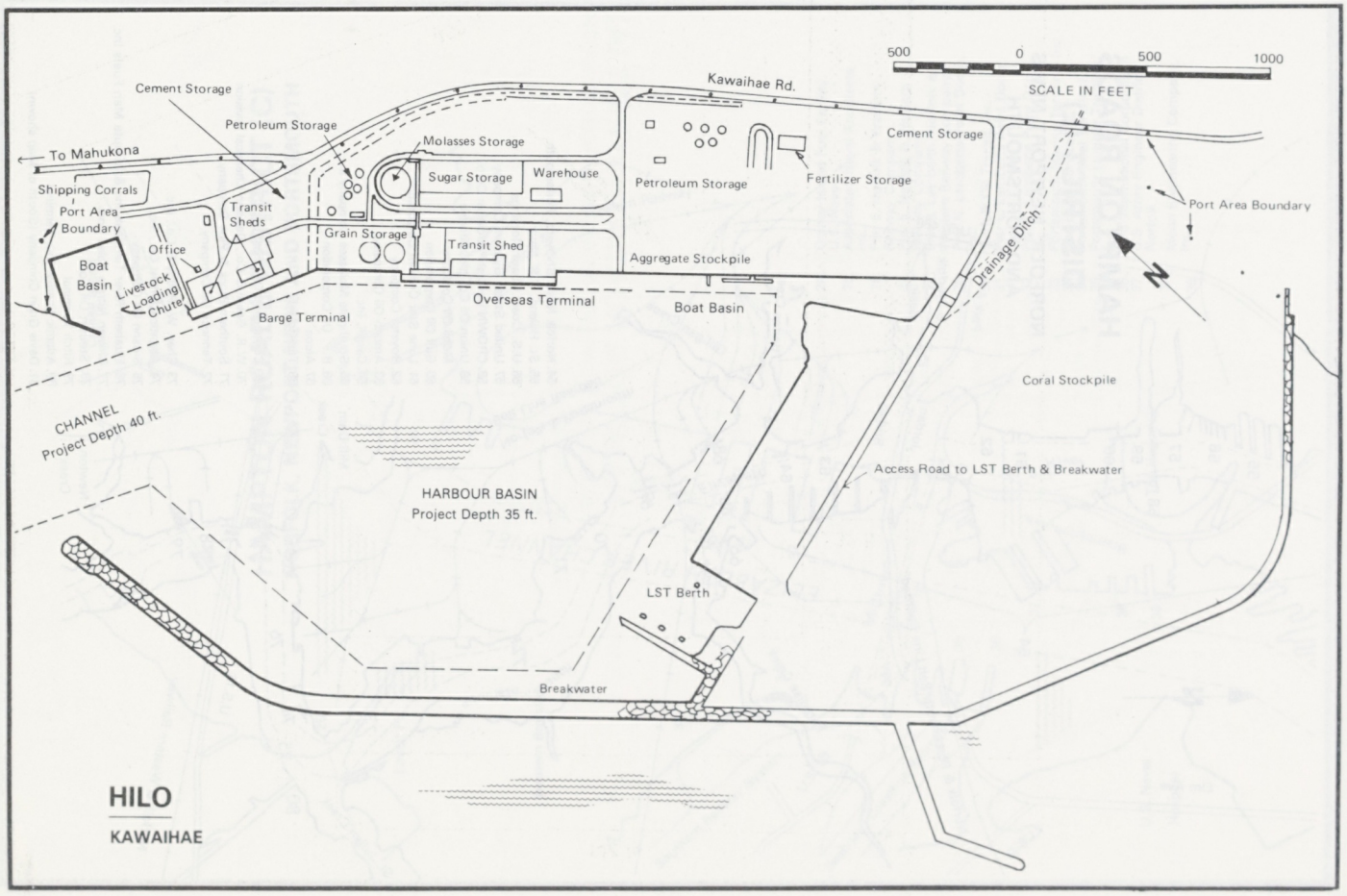

HAMPTON ROADS DISTRICT (C)
NORFOLK, NEWPORT NEWS AND PORTSMOUTH
Craney Island
24
25
Lovett Pt.
26
27
28
Western Branch
ELIZABETH RIVER CHANNEL
Norfolk & Western Railway
29
30
31
32
33
Southern Railway System
34
U.S. 58
Seaboard Coastline Railroad
34A
Midtown Tunnel
35
36
37
38
39
U.S. Naval Hospital
Brambleton Ave.
U.S. 58
The Hague
24. Craney Island Fuel Facility, U.S. Navy
25. Associated Naval Architects, Inc.
26. Pier 6, Norfolk & Western Railway Company
27. Pier 5, Norfolk & Western Railway Company
28. Pier 3, Lay berth, Norfolk & Western Railway Company
29. Pier N, Lamberts Point Docks, Inc.
30 Norfolk Oil Transit, Inc.
31. Pier L. Lamberts Point Docks, Inc.
32. Pier P, Lamberts Point Docks, Inc.
33 Portsmouth Marine Terminal Inc.
34. Sea-Land Service Inc.
34A Portsmouth Coal Terminal
35. Portsmouth Lumber Treating, Inc.
36. Bird International Corporation
37. U.S. Army Engineer District, Norfolk
38. Moon Engineering Company, Inc.
39.

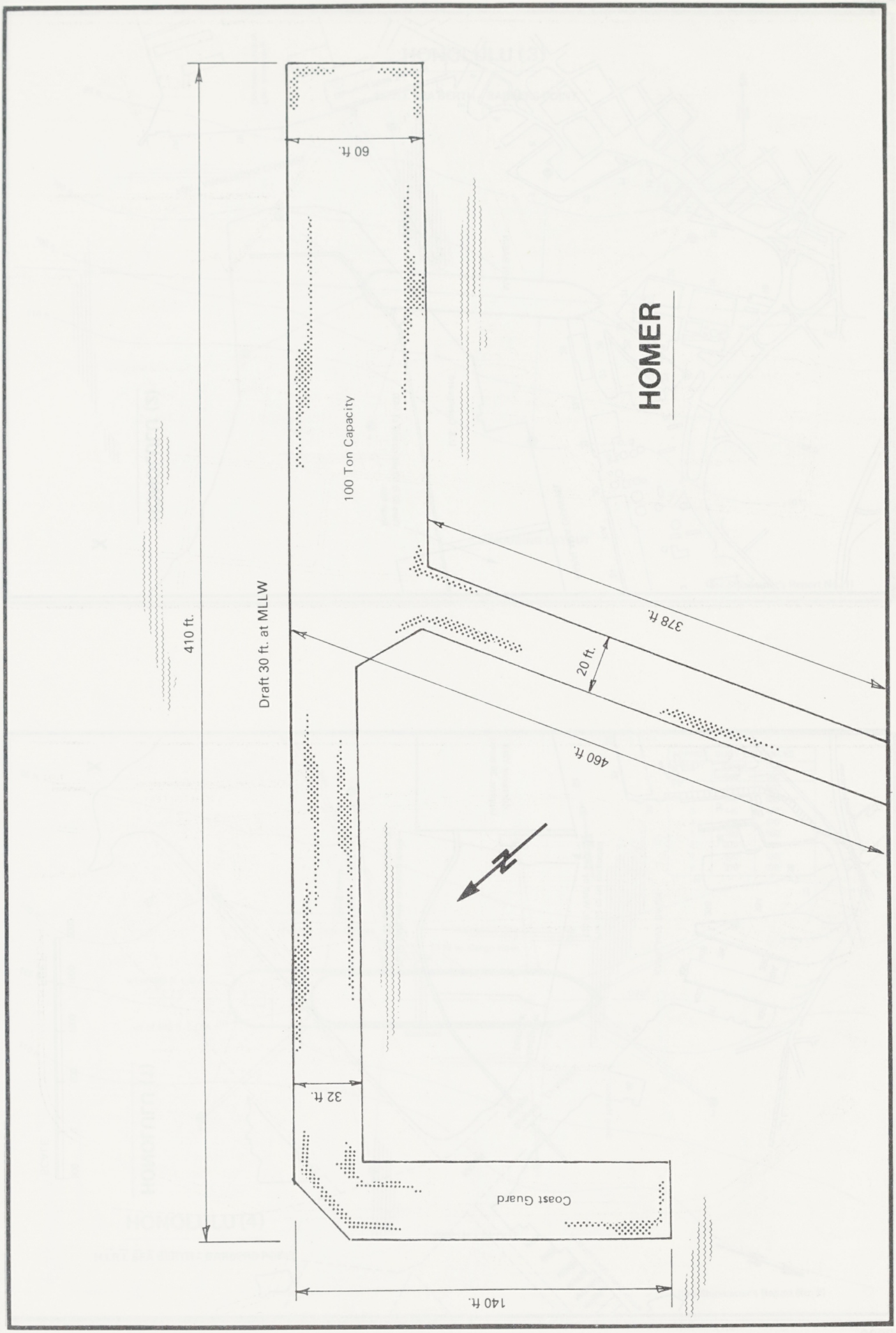

HAMPTON ROADS DISTRICT (B)
NORFOLK, NEWPORT NEWS AND PORTSMOUTH
U. S. NAVAL STATION
N
14
15
Taussig Blvd.
Norfolk & Western Railway
Hampton Blvd.
16
17
Norfolk & Portsmouth Belt Line Railroad
19
ELIZABETH RIVER CHANNEL
20
21
22
23
Norfolk & Portsmouth Belt Line Railroad
Tanner Pt.
14. U.S. Naval Station
15. Oceanographic Office, U.S. Naval Branch
16. Continental Grain Company
17. Piers A & B, Sewells Point Division of Lamberts Point Docks, Inc.
19. Exxon Co. U.S.A.
20. North Berth, Norfolk International Terminals
21. Pier 2, Norfolk International Terminals
22. Pier 1, Norfolk International Terminals
23. Container Berths No.1 & 2 & 3,

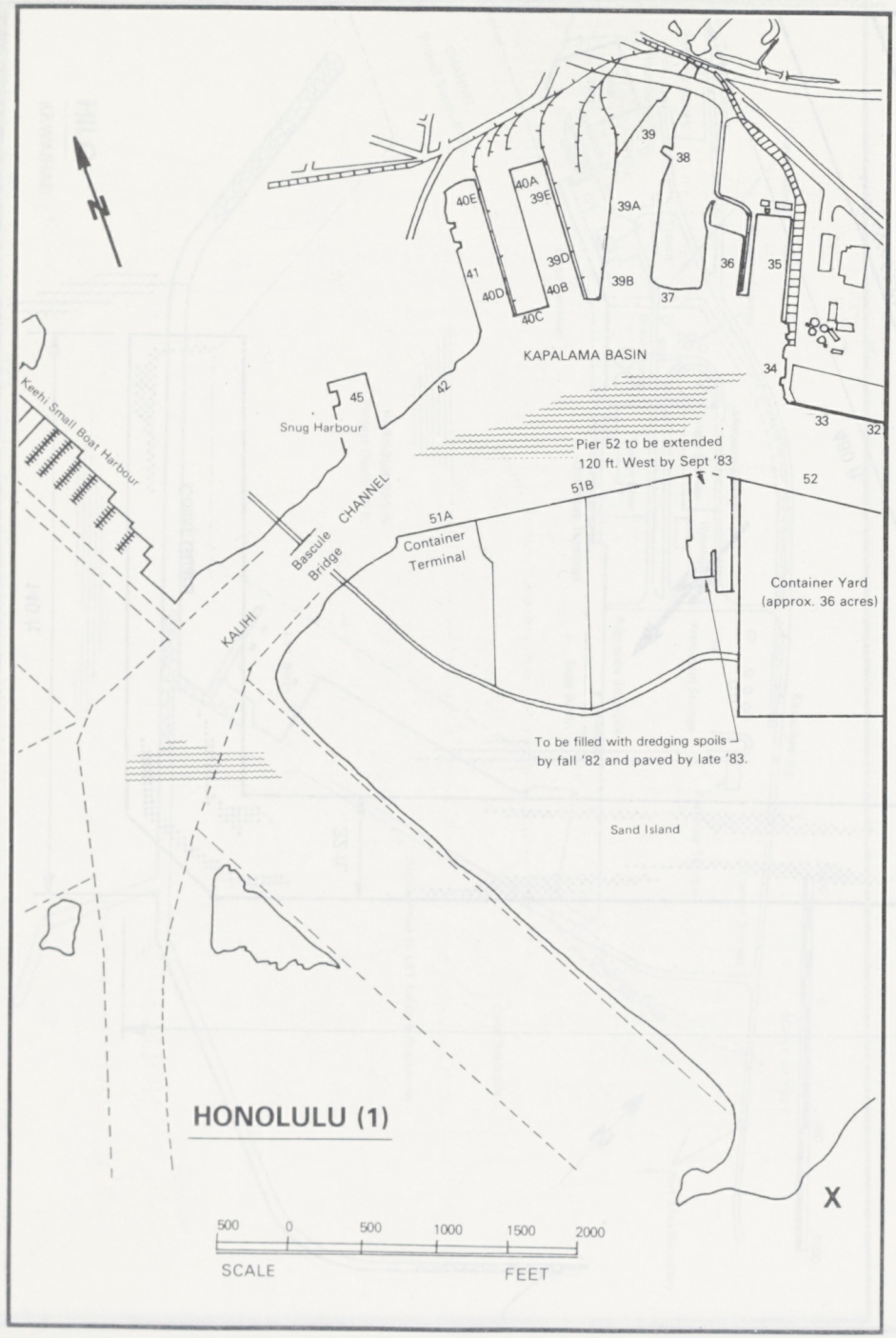

HAMPTON ROADS DISTRICT (E)
NORFOLK, NEWPORT NEWS AND PORTSMOUTH
N
Elm Ave.
U.S.17
Norfolk & Portsmouth Belt Line Railroad
Jordan Bridge
Park Ave.
S. Norfolk Basin
U.S. 460
Paradise Creek
Jones Creek
Gilligan Creek
Elizabeth River
Norfolk & Portsmouth Belt Line Railroad
Southern Branch
St. Julian Creek
Mill Dam Creek
U.S.13
Norfolk & Western Railway
Newton Creek
54. Norfolk Naval Shipyard, Portsmouth
55. St. Helena, U.S. Navy
56. U.S. Coast Guard Moorings
57. United States Gypsum Company
58. CROWN Central Petroleum Corp.
59. Union Oil Co. of California
Mobil Oil Company
60. Gulf Oil Corporation
61. Lone Star Cement Corporation
62. Royster Company
63. Amoco Oil Company
64. Cargill, Inc.
65. Southgate Molasses Company Inc.
66. B.P. Oil Corporation
67. Alcoa
68. Texaco Inc.
69 Continental Oil Company
70. W.R. Grace & Co., Davison Chemical Division
71. Southern Block & Pipe Company
72. Tenneco Oil Company
73. Chas. W. Priddy & Co., Inc.
74. Atlantic Cement Co., Inc.
75. Swann Oil Company
76. Elizabeth River Terminals Inc.& Minute Man Fuels Inc.
77. Chilean Nitrate Sales Corp.
78. Steuart Oil Co.
79. Hitch Terminal
80. Atlantic Energy, Inc. Terminal
81. Davis Grain Company (South of Map shown)


HAMPTON ROADS DISTRICT (D)
NORFOLK, NEWPORT NEWS AND PORTSMOUTH
Elizabeth River
U.S. 58
Southern Branch
Downtown Tunnel
City Hall Ave.
Bank St.
U.S. 58A
Norfolk Southern Railway
Pescara Creek
Norfolk & Western Railway
Elizabeth River
Eastern Branch
Steamboat Creek
Norfolk Southern Railway
Norfolk & Western Railway
40. National Oceanic and Atmsopheric Administration, National Ocean Survey, Atlantic Marine Center
41. Southgate Terminal Corporation
42. Carfloat Bridge, Norfolk Terminal of Chesapeake and Ohio Railway Co.
43. Berkley Shipbuilding and Drydock Co.
44. Metro Machine Corporation
45. Norfolk, Baltimore & Carolina Line, Inc.
46. Jones Cold Storage Corp.
Southgate Terminal Corporation
47. Colonna's Shipyard, Inc.
48. Moon Shipyard & Repair Corporation
49. Craig Brothers Marine Railway
50. Norfolk Shipbuilding & Drydock Corp.
Brambleton Plant
51. Norfolk Shipbuilding & Drydock Corp., Southern Plant
52. Norfolk Shipbuilding & Drydock Corp., Berkley Plant
53. Allied Ship Repair Service

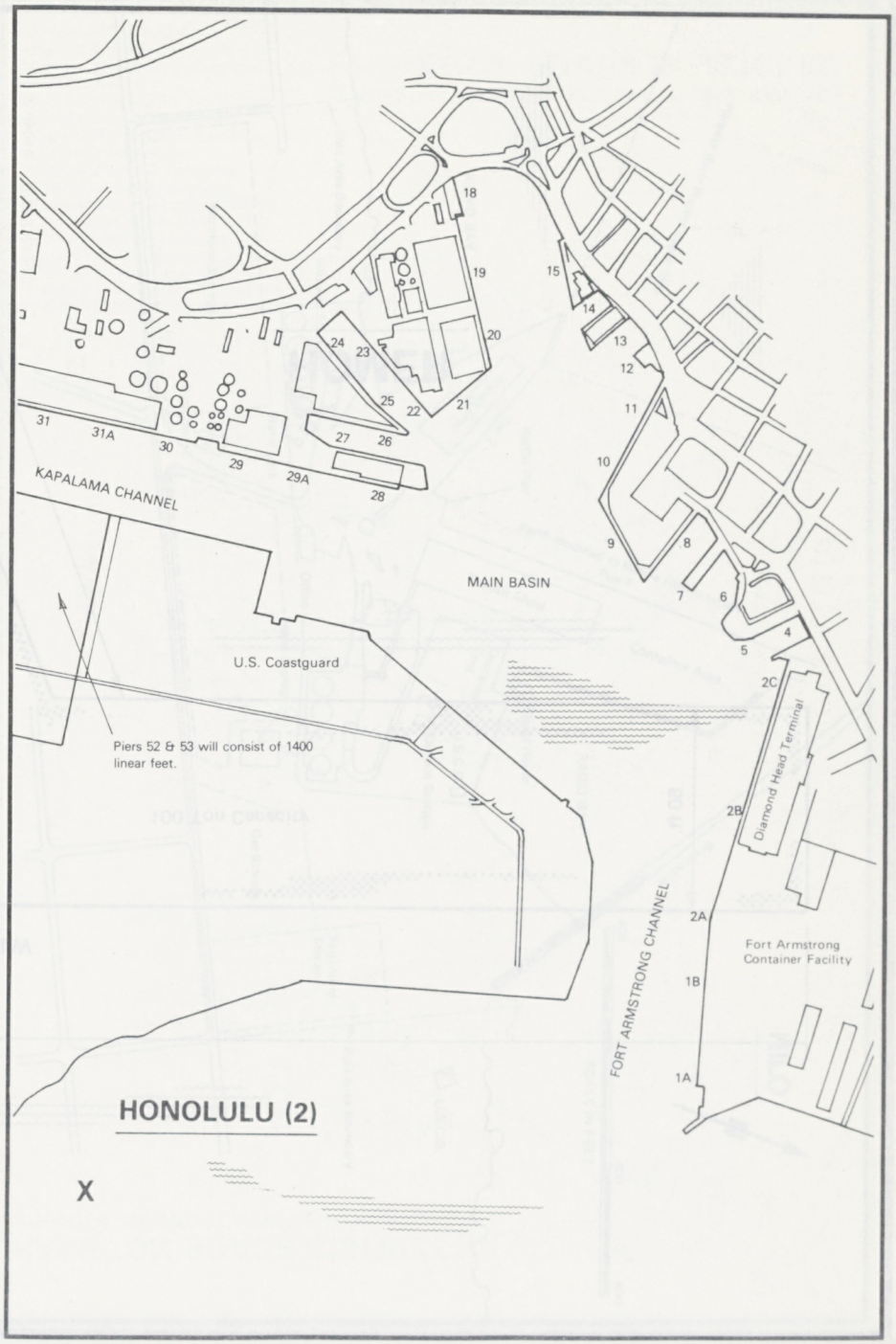

HILO
Harbour Basin Project Depth 35 ft
Berth modified to handle Ro/Ro vessels
Pier 1
Container Area
Breakwater
400 0 400 800
SCALE IN FEET
RADIO BAY
Boat House
Ro/Ro Pier
Pier 2
Transit Shed
Transit Shed
Container Yard
U.S.C.G.
Cement Storage
U.S.C.G.
KUHIO BAY
Pier 3
Port Area Boundary
Molasses Storage
Office
Sugar Storage
Water tank
Petroleum Storage
Port Area Boundary
Petroleum Storage
Gas Storage
Customs


500 0 500 1000
SCALE IN FEET
Kawaihae Rd.
Cement Storage
Petroleum Storage
To Mahukona
Molasses Storage
Sugar Storage
Warehouse
Petroleum Storage
Fertilizer Storage
Cement Storage
Shipping Corrals
Port Area Boundary
Transit Sheds
Grain Storage
Transit Shed
Aggregate Stockpile
Port Area Boundary
Boat Basin
Office
Livestock Loading Chute
Overseas Terminal
Boat Basin
Barge Terminal
Drainage Ditch
Coral Stockpile
CHANNEL
Project Depth 40 ft.
HARBOUR BASIN
Project Depth 35 ft.
Access Road to LST Berth & Breakwater
LST Berth
Breakwater
HILO
KAWAIHAE


HOMER
60 ft.
100 Ton Capacity
410 ft.
Draft 30 ft. at MLLW
378 ft.
20 ft.
460 ft.
N
32 ft.
Coast Guard
140 ft.



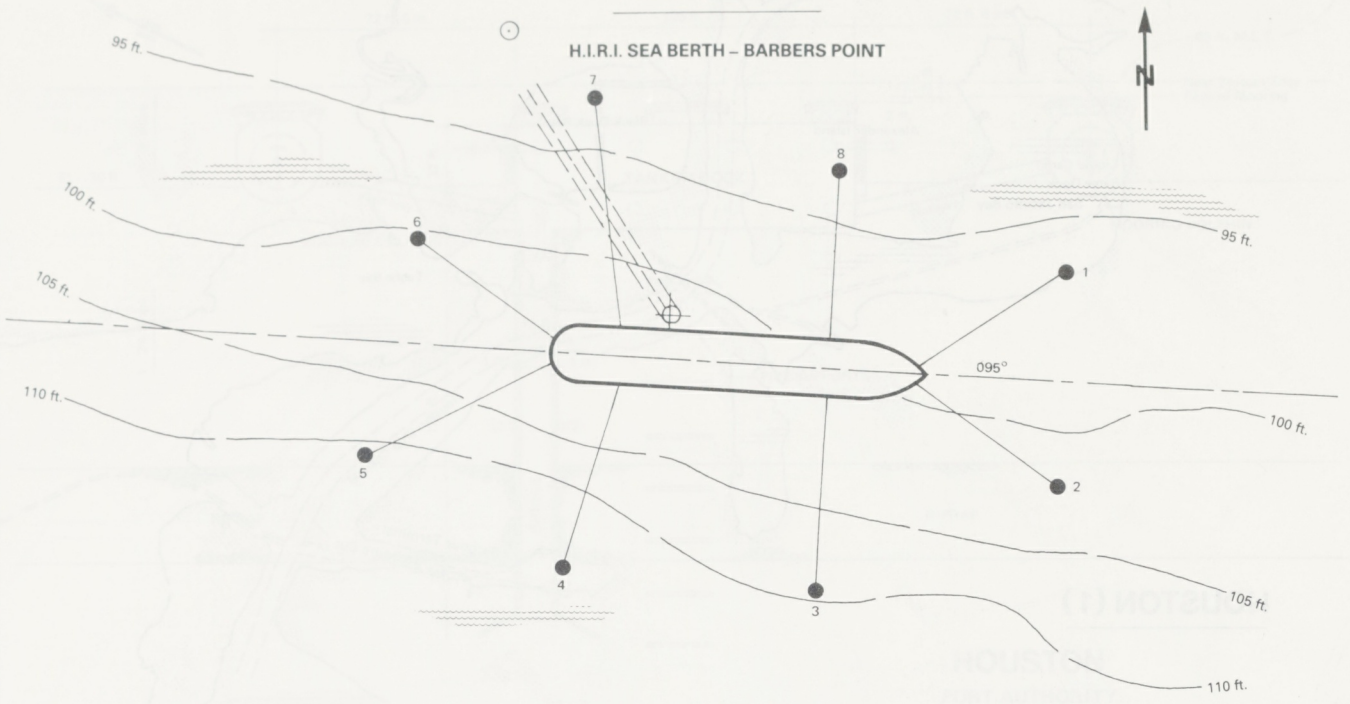
HONOLULU (1)



HONOLULU (2)

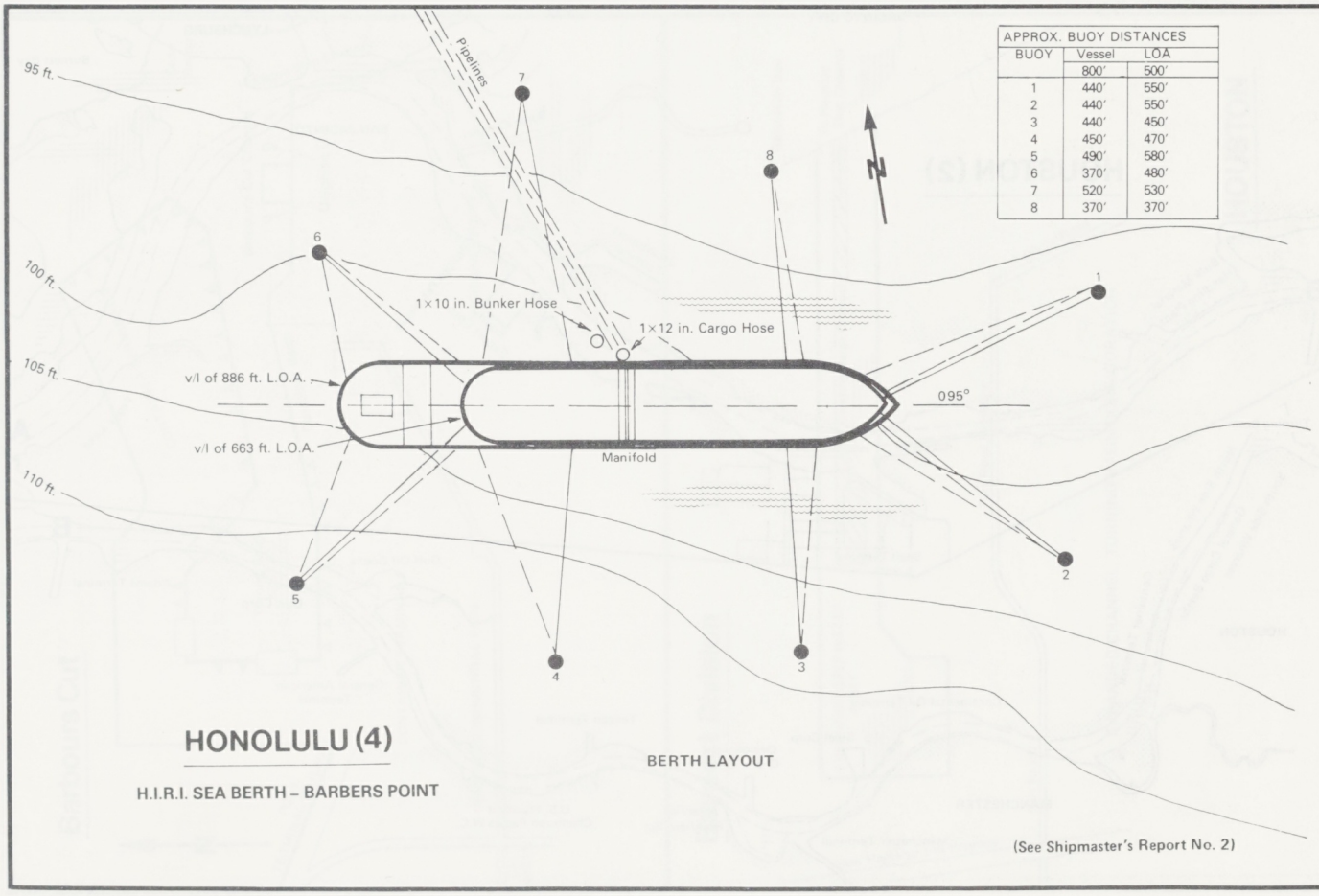
HONOLULU (3)

H.I.R.I. SEA BERTH – BARBERS POINT



MOORING LAYOUT

(See Shipmaster's Report No. 1)



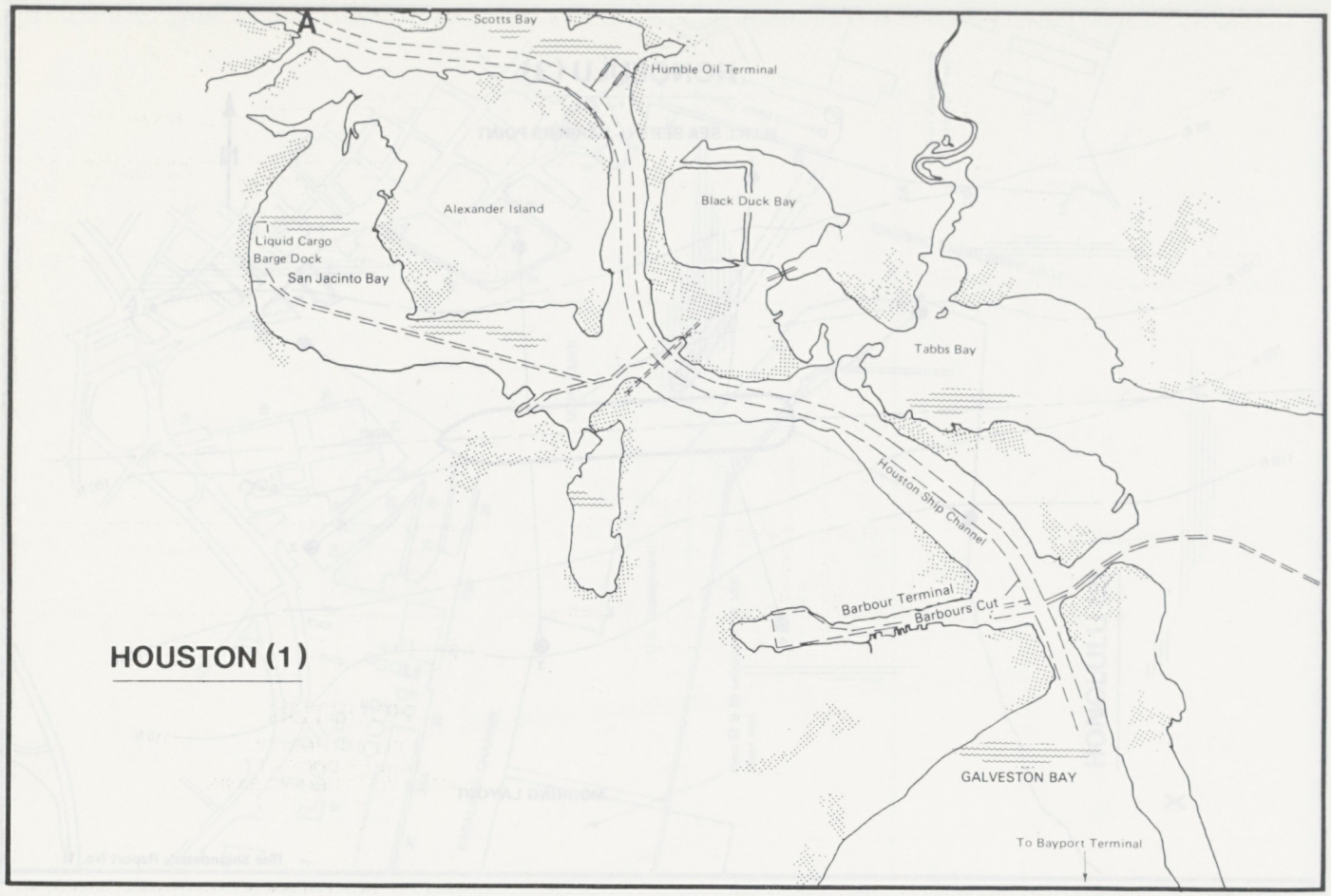
APPROX. BUOY DISTANCES		
BUOY	Vessel	LOA
	800′	500′
1	440′	550′
2	440′	550′
3	440′	450′
4	450′	470′
5	490′	580′
6	370′	480′
7	520′	530′
8	370′	370′

HONOLULU (4)

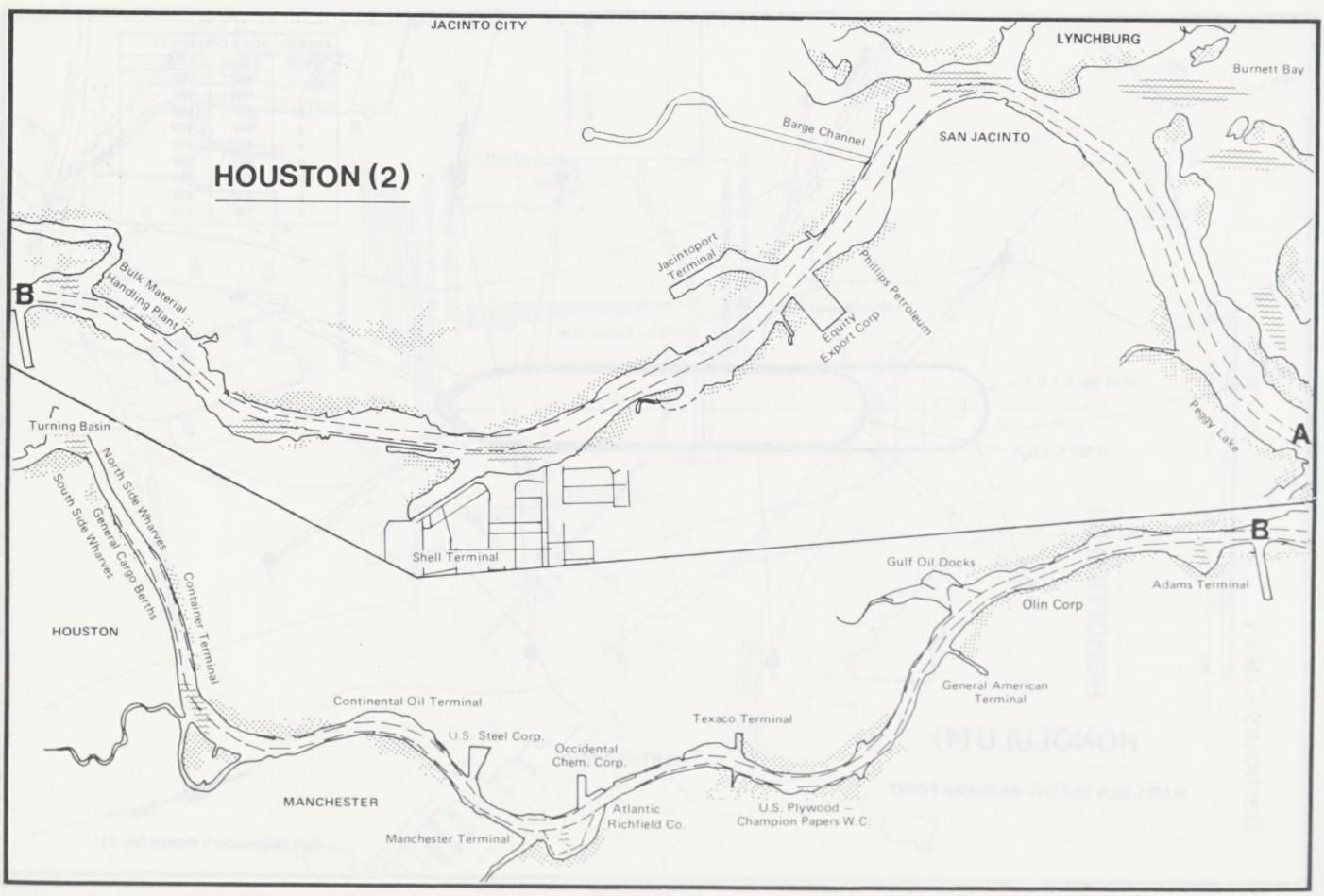
H.I.R.I. SEA BERTH – BARBERS POINT

BERTH LAYOUT

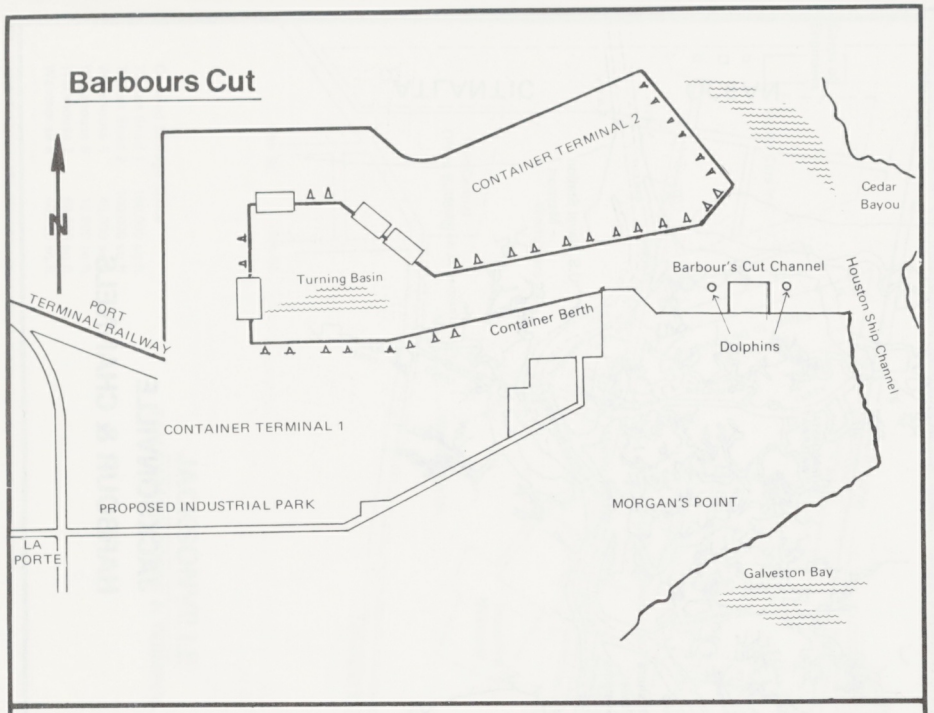
(See Shipmaster's Report No. 2)

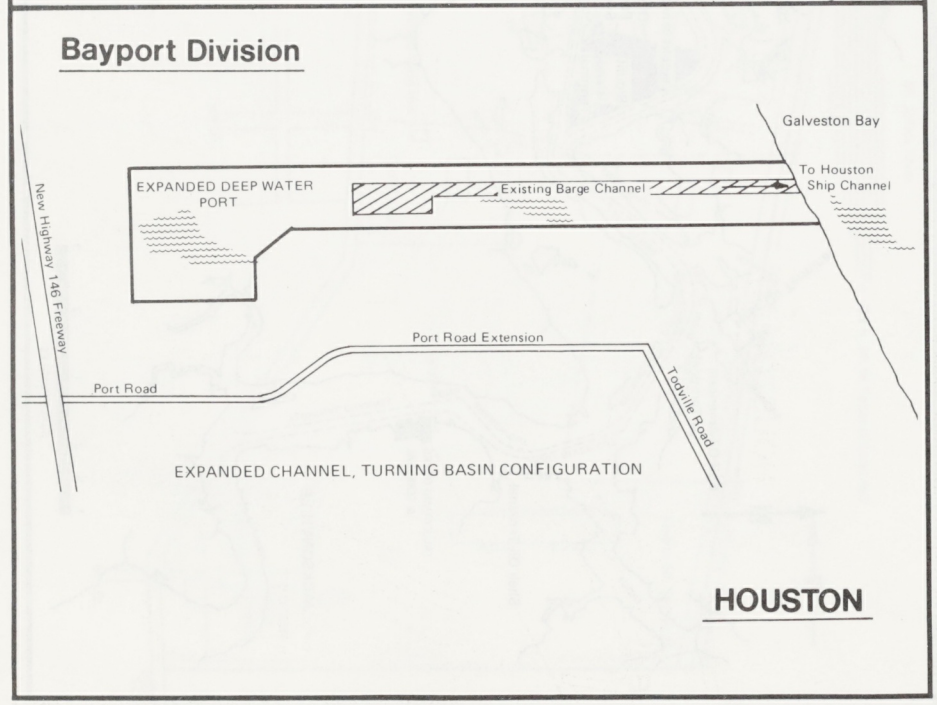


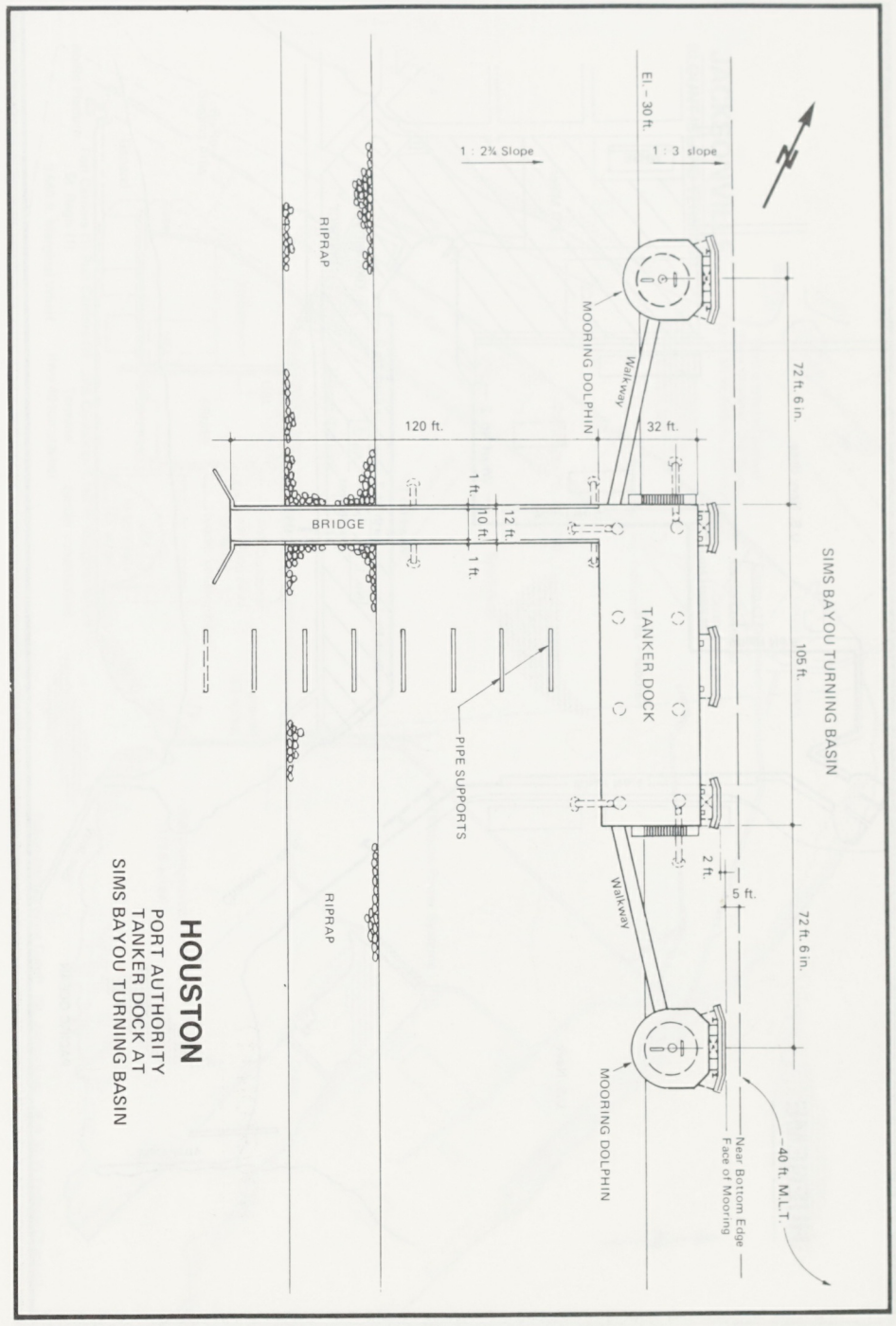
HOUSTON (1)

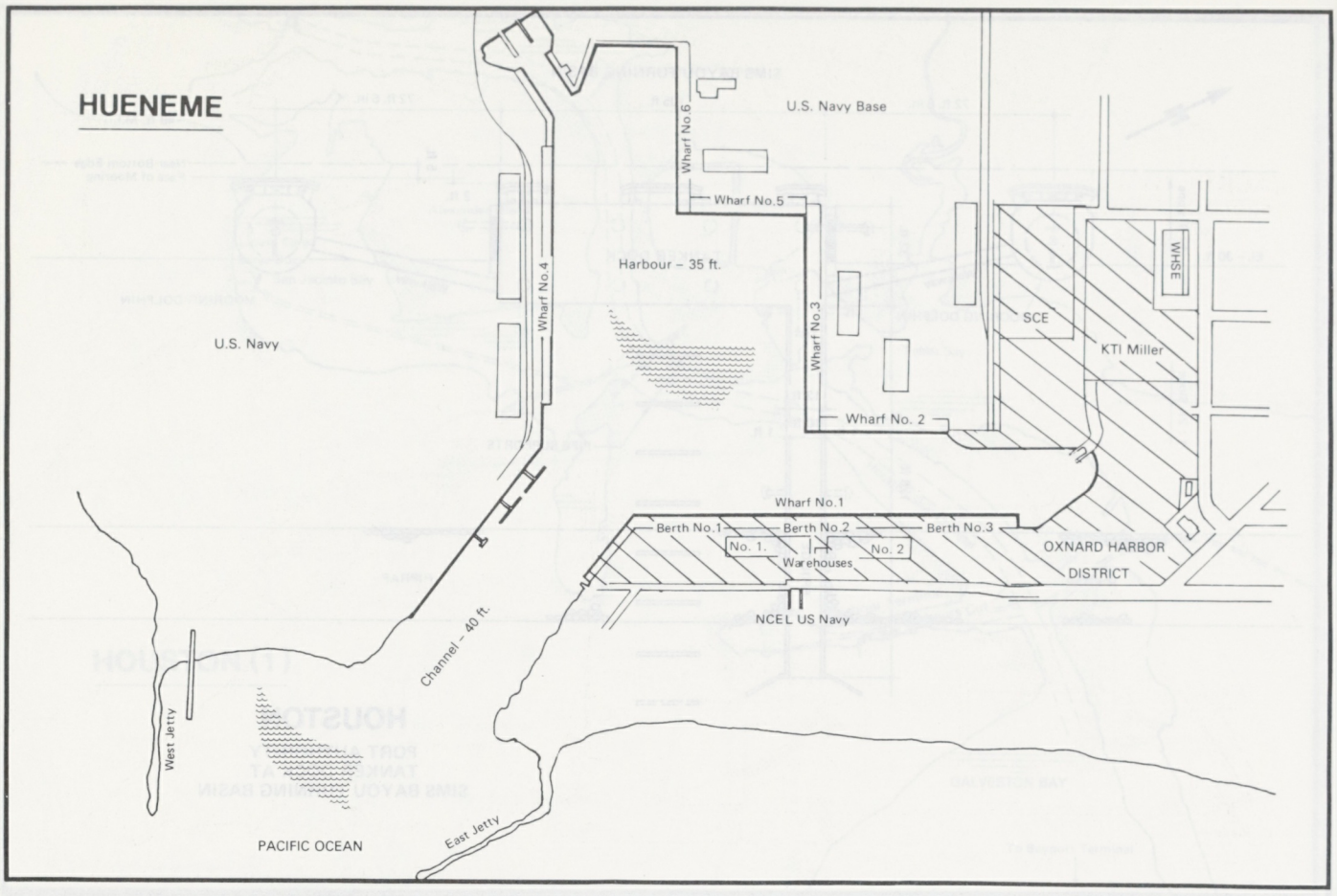


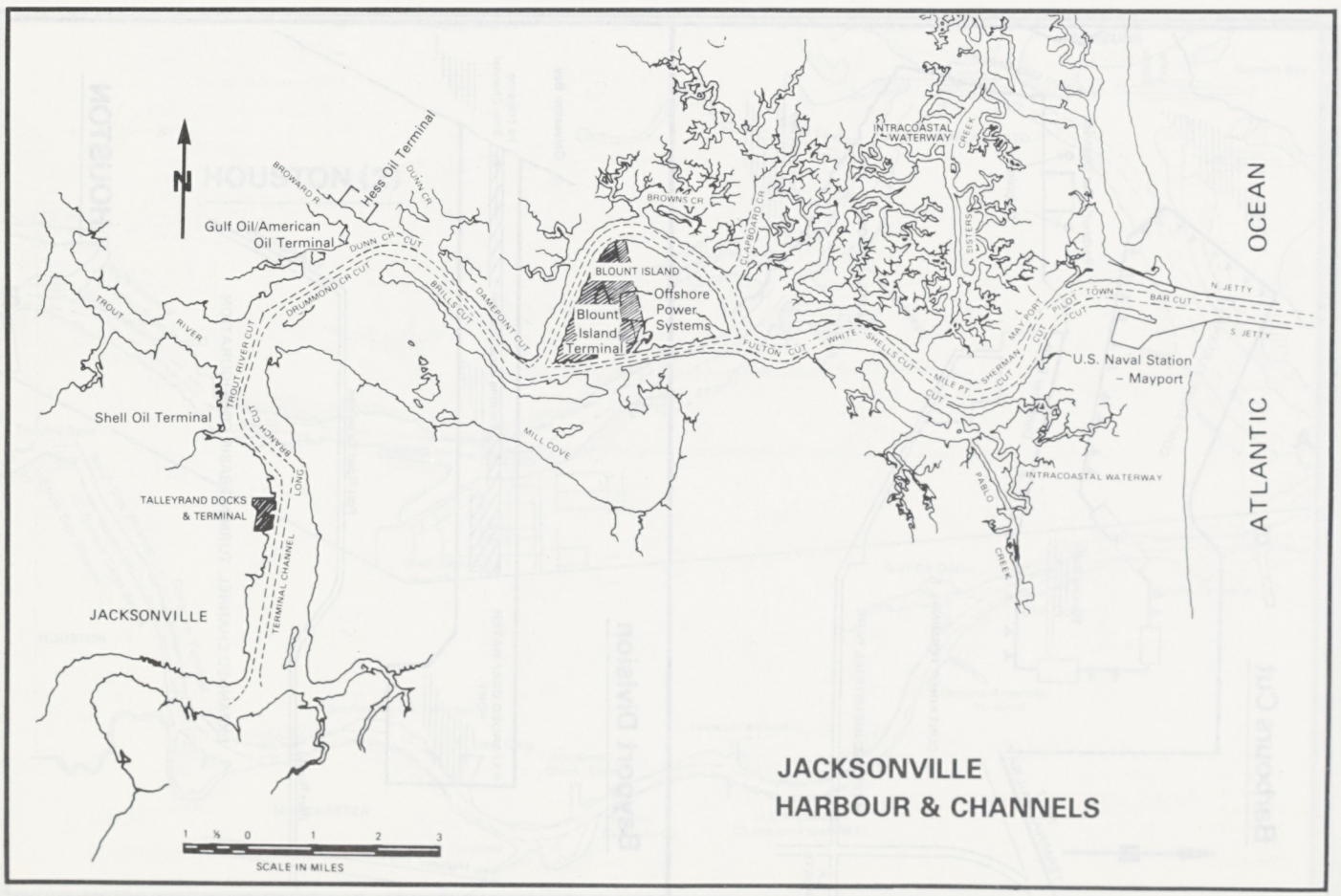
HOUSTON (2)

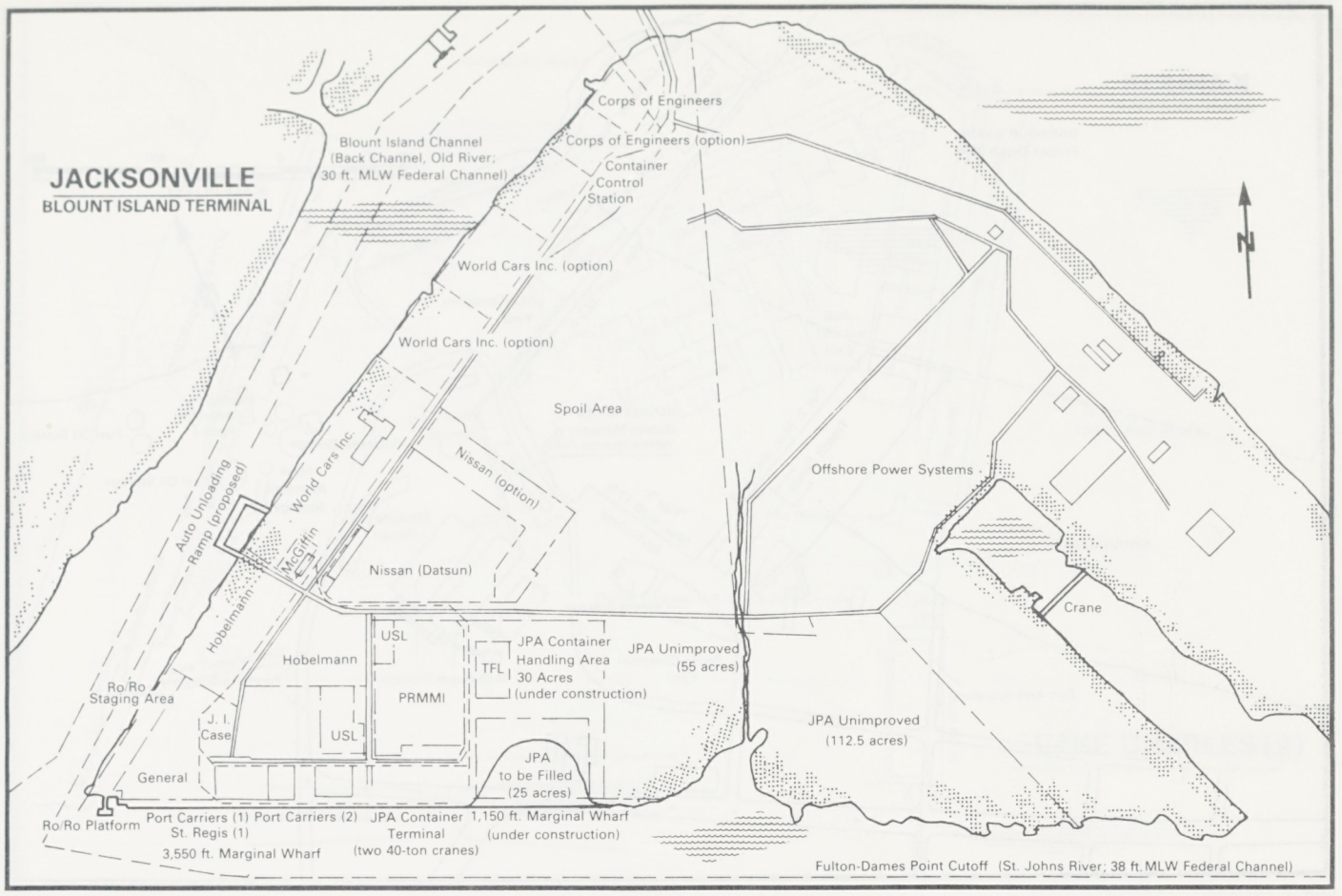

Barbours Cut
N
CONTAINER TERMINAL 2
Cedar Bayou
Turning Basin
Barbour's Cut Channel
Houston Ship Channel
PORT TERMINAL RAILWAY
Container Berth
Dolphins
CONTAINER TERMINAL 1
PROPOSED INDUSTRIAL PARK
MORGAN'S POINT
LA PORTE
Galveston Bay

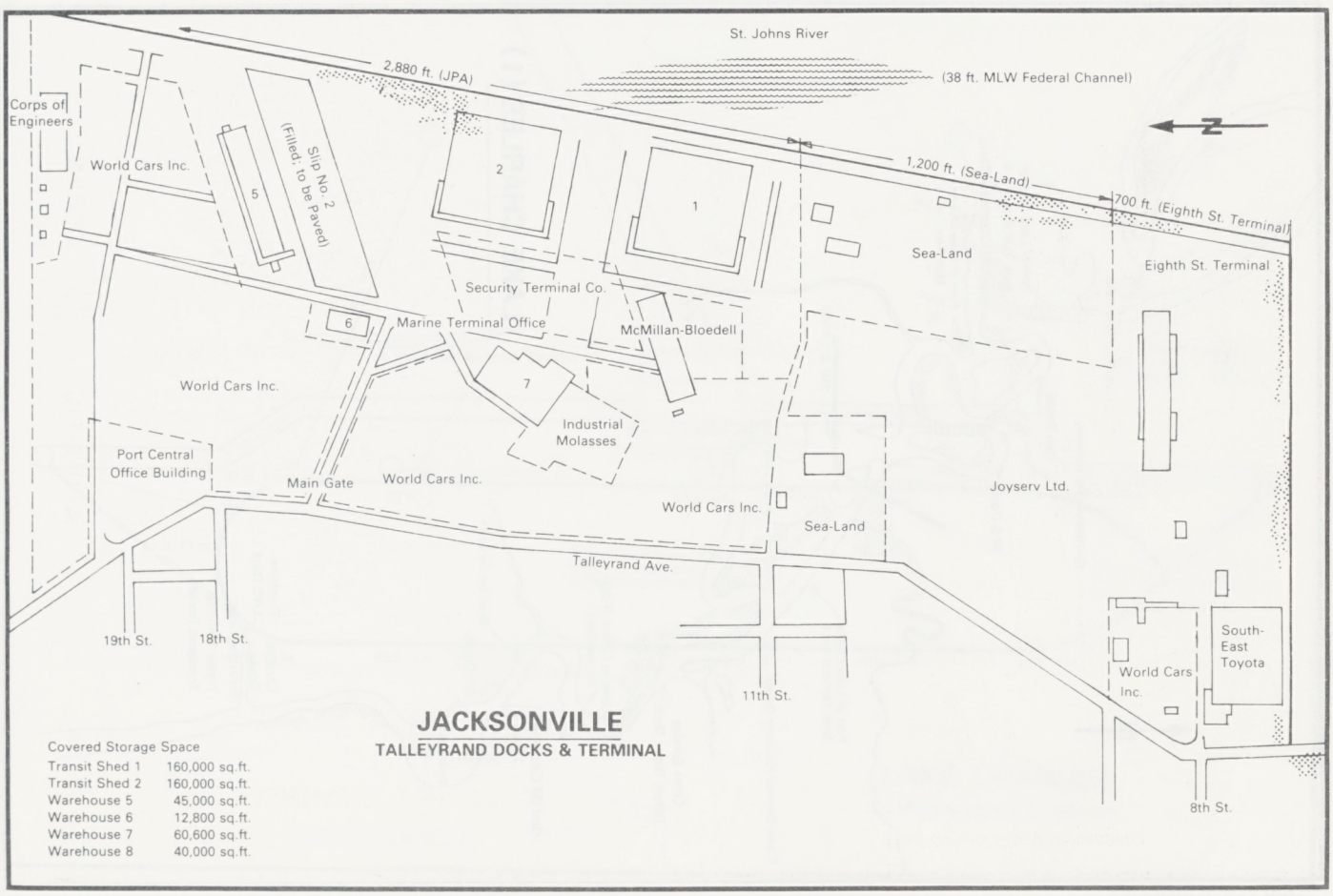

Bayport Division
Galveston Bay
EXPANDED DEEP WATER PORT
Existing Barge Channel
To Houston Ship Channel
New Highway 146 Freeway
Port Road Extension
Port Road
Todville Road
EXPANDED CHANNEL, TURNING BASIN CONFIGURATION
HOUSTON

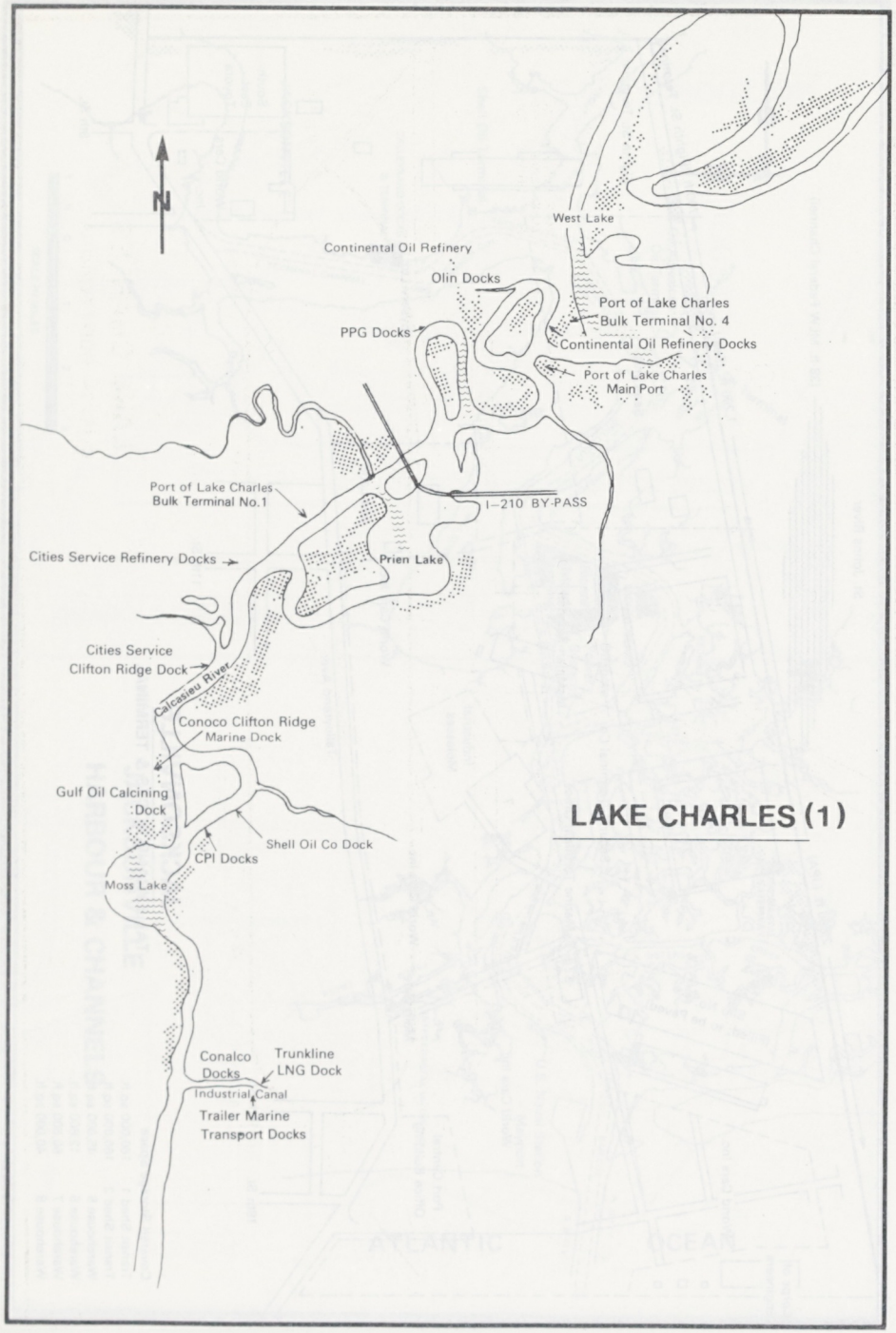

HOUSTON
PORT AUTHORITY
TANKER DOCK AT
SIMS BAYOU TURNING BASIN
SIMS BAYOU TURNING BASIN
El. - 30 ft.
1 : 2¾ Slope
1 : 3 slope
RIPRAP
MOORING DOLPHIN
Walkway
72 ft. 6 in.
120 ft.
32 ft.
1 ft.
10 ft.
12 ft.
BRIDGE
TANKER DOCK
105 ft.
PIPE SUPPORTS
2 ft.
5 ft.
Near Bottom Edge Face of Mooring
40 ft. M.L.T.

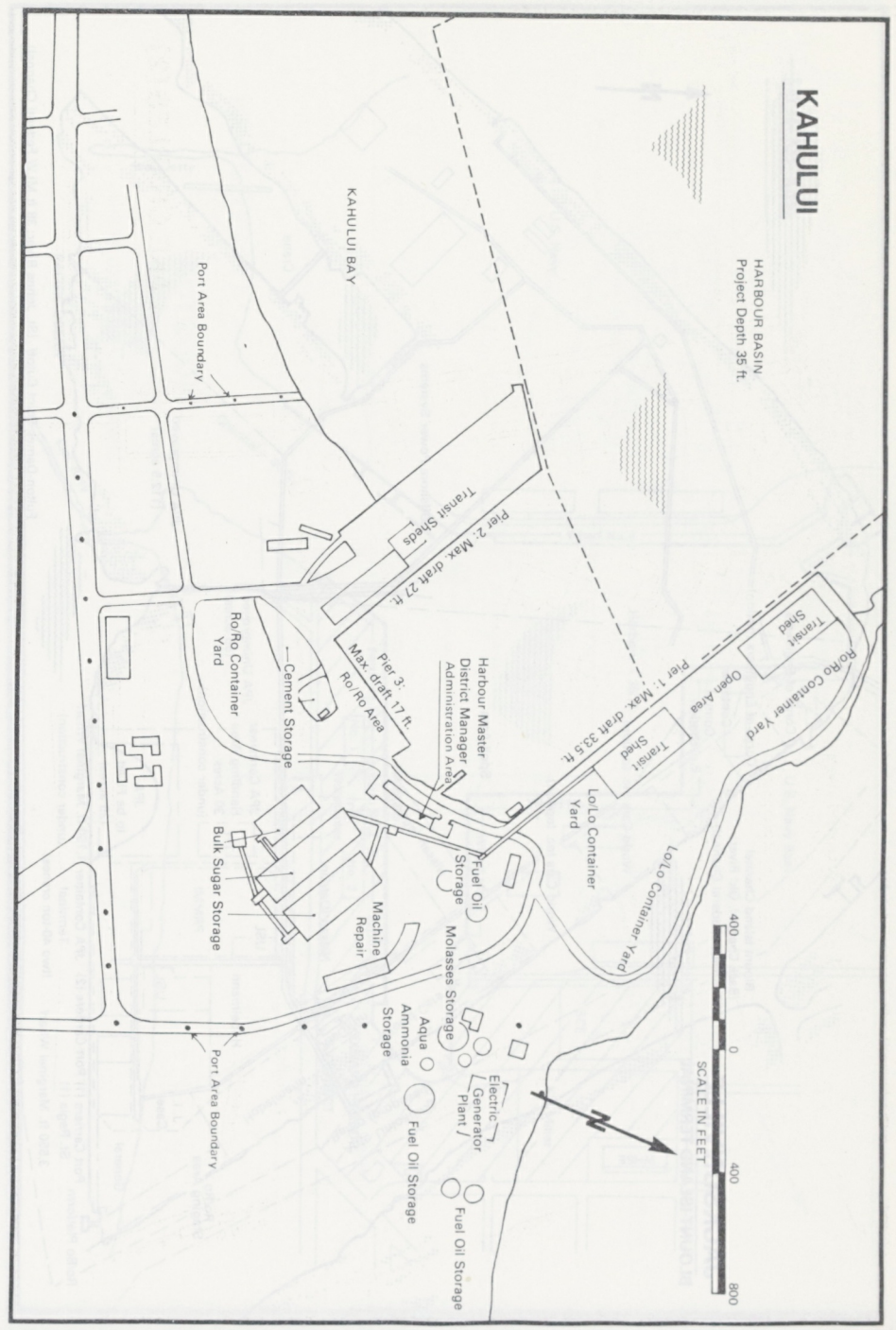

HUENEME
U.S. Navy Base
Wharf No.6
Wharf No.5
Wharf No.4
Wharf No.3
Wharf No. 2
Harbour – 35 ft.
U.S. Navy
WHSE
SCE
KTI Miller
Wharf No.1
Berth No.1
Berth No.2
Berth No.3
No. 1
No. 2
Warehouses
OXNARD HARBOR
DISTRICT
NCEL US Navy
Channel – 40 ft.
West Jetty
East Jetty
PACIFIC OCEAN

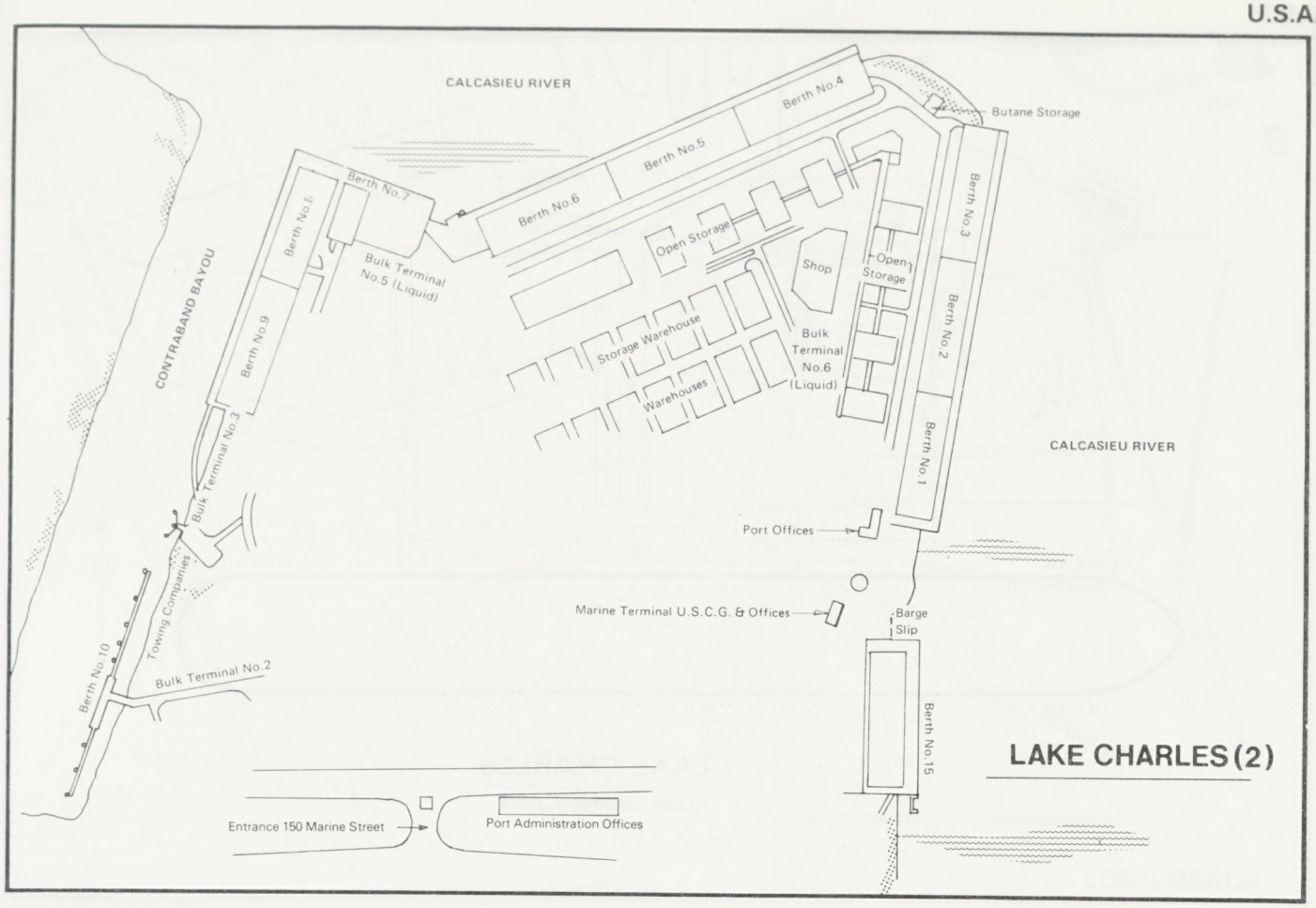

N
Hess Oil Terminal
Gulf Oil/American
Oil Terminal
BROWARD R.
DUNN CR.
DUNN CR. CUT
DRUMMOND CR CUT
BILLS CUT
DAMEPOINT CUT
BLOUNT ISLAND
Offshore
Power
Systems
Blount
Island
Terminal
BROWNS CR.
CLARKSWOOD CR.
INTRACOASTAL
WATERWAY
CREEK
FULTON CUT
WHITE SHELLS CUT
MILE PT.
CUT
SHERMAN
CUT
MAYPORT
CUT
PILOT
TOWN
CUT
BAR CUT
N. JETTY
S. JETTY
U.S. Naval Station
– Mayport
OCEAN
ATLANTIC
TROUT
RIVER
TROUT RIVER CUT
BRANCH CUT
LONG
TERMINAL CHANNEL
Shell Oil Terminal
TALLEYRAND DOCKS
& TERMINAL
JACKSONVILLE
MILL COVE
PABLO
CREEK
INTRACOASTAL WATERWAY
1 ½ 0 1 2 3
SCALE IN MILES
JACKSONVILLE
HARBOUR & CHANNELS

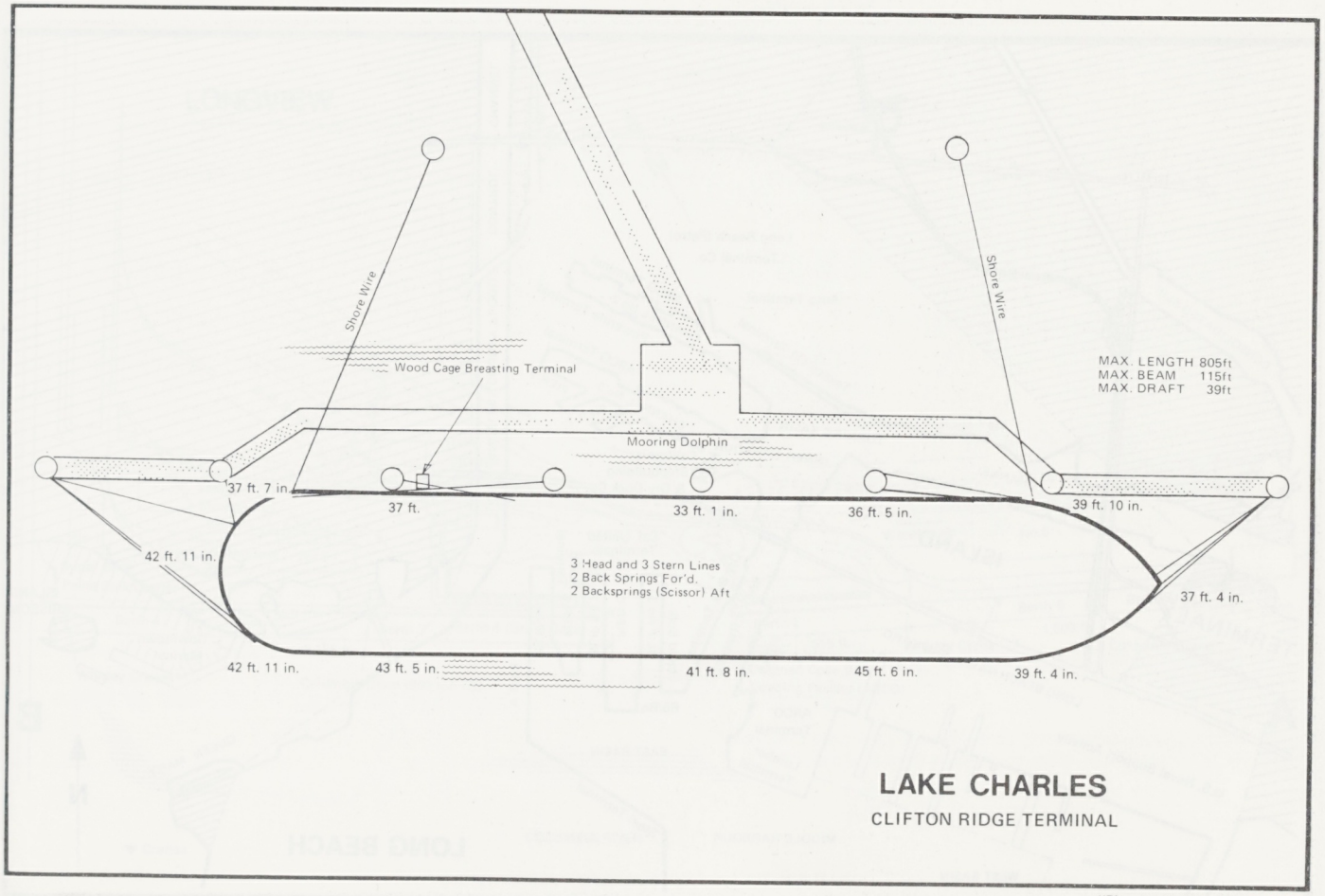

JACKSONVILLE
BLOUNT ISLAND TERMINAL
Corps of Engineers
Blount Island Channel
(Back Channel, Old River;
30 ft. MLW Federal Channel)
Corps of Engineers (option)
Container
Control
Station
N
World Cars Inc. (option)
World Cars Inc. (option)
Spoil Area
Offshore Power Systems
Auto Unloading
Ramp (proposed)
World Cars Inc.
Nissan (option)
McGiffin
Hobelmann
Nissan (Datsun)
Crane
USL
Hobelmann
TFL
JPA Container
Handling Area
30 Acres
(under construction)
JPA Unimproved
(55 acres)
Ro/Ro
Staging Area
PRMMI
J. I.
Case
USL
JPA Unimproved
(112.5 acres)
JPA
to be Filled
(25 acres)
General
Ro/Ro Platform
Port Carriers (1)
St. Regis (1)
Port Carriers (2)
JPA Container
Terminal
(two 40-ton cranes)
1,150 ft. Marginal Wharf
(under construction)
3,550 ft. Marginal Wharf
Fulton-Dames Point Cutoff (St. Johns River; 38 ft. MLW Federal Channel)


St. Johns River
2,880 ft. (JPA)
(38 ft. MLW Federal Channel)
Corps of
Engineers
N
World Cars Inc.
5
Slip No. 2
(Filled; to be Paved)
2
1
1,200 ft. (Sea-Land)
700 ft. (Eighth St. Terminal)
Sea-Land
Eighth St. Terminal
Security Terminal Co.
6
Marine Terminal Office
McMillan-Bloedell
World Cars Inc.
7
Industrial
Molasses
Port Central
Office Building
Main Gate
World Cars Inc.
World Cars Inc.
Sea-Land
Joyserv Ltd.
Talleyrand Ave.
19th St.
18th St.
11th St.
South-
East
Toyota
World Cars
Inc.
8th St.
JACKSONVILLE
TALLEYRAND DOCKS & TERMINAL
Covered Storage Space
Transit Shed 1 160,000 sq.ft.
Transit Shed 2 160,000 sq.ft.
Warehouse 5 45,000 sq.ft.
Warehouse 6 12,800 sq.ft.
Warehouse 7 60,600 sq.ft.
Warehouse 8 40,000 sq.ft.

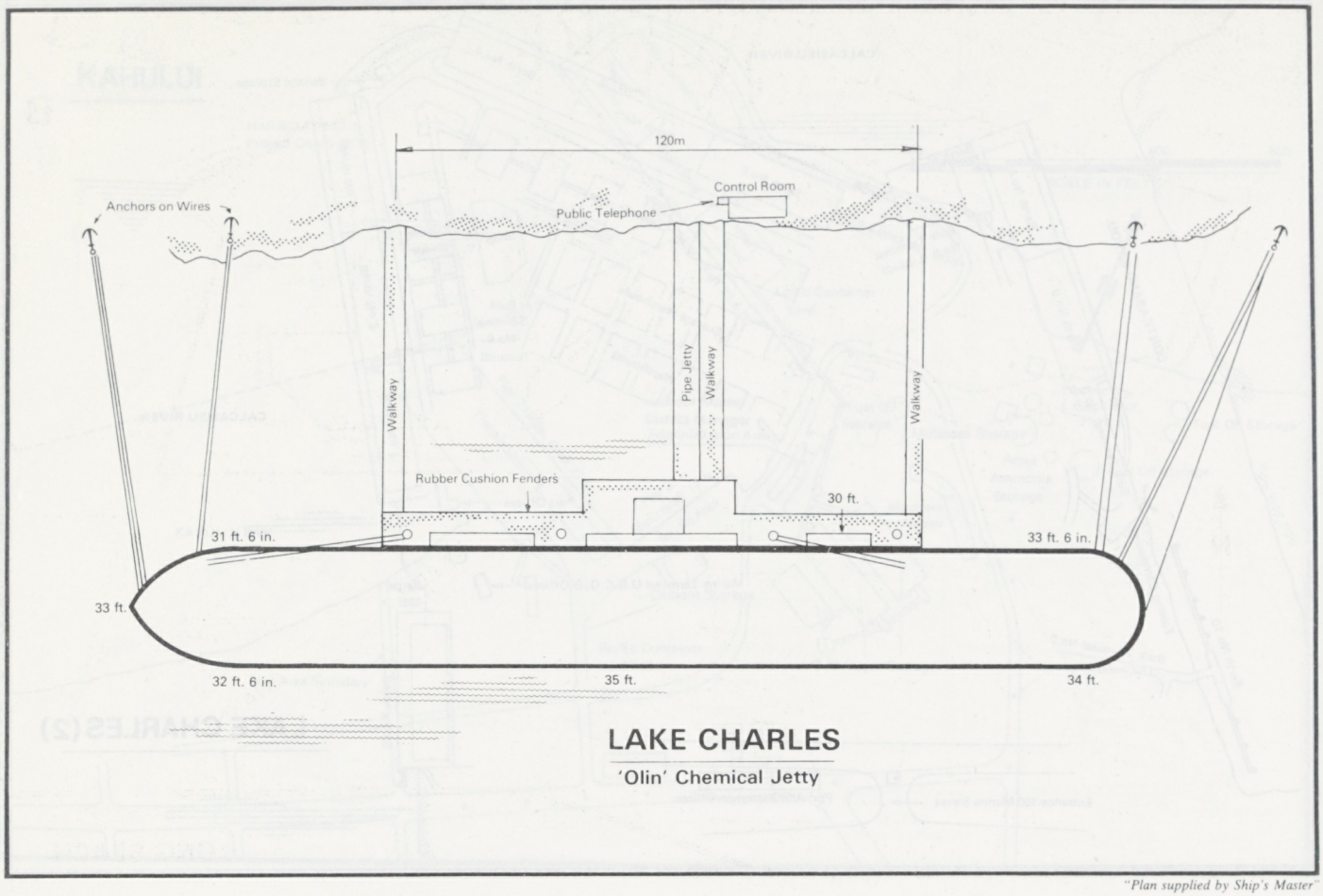

N
West Lake
Continental Oil Refinery
Olin Docks
Port of Lake Charles
Bulk Terminal No. 4
PPG Docks
Continental Oil Refinery Docks
Port of Lake Charles
Main Port
Port of Lake Charles
Bulk Terminal No.1
I–210 BY-PASS
Cities Service Refinery Docks
Prien Lake
Cities Service
Clifton Ridge Dock
Calcasieu River
Conoco Clifton Ridge
Marine Dock
Gulf Oil Calcining
Dock
Shell Oil Co Dock
CPI Docks
Moss Lake
Conalco
Docks
Trunkline
LNG Dock
Industrial Canal
Trailer Marine
Transport Docks
LAKE CHARLES (1)


KAHULUI
HARBOUR BASIN
Project Depth 35 ft.
KAHULUI BAY
Port Area Boundary
Transit Sheds
Pier 2: Max. draft 27 ft.
Ro/Ro Container Yard
Cement Storage
Pier 3: Max. draft 17 ft.
Ro/Ro Area
Harbour Master
District Manager
Administration Area
Pier 1: Max. draft 33.5 ft.
Transit Shed
Open Area
Transit Shed
Ro/Ro Container Yard
Lo/Lo Container Yard
Fuel Oil Storage
Bulk Sugar Storage
Machine Repair
Molasses Storage
Lo/Lo Container Yard
Aqua Ammonia Storage
Fuel Oil Storage
Electric Generator Plant
Fuel Oil Storage
Port Area Boundary
N
400
0
400
800
SCALE IN FEET





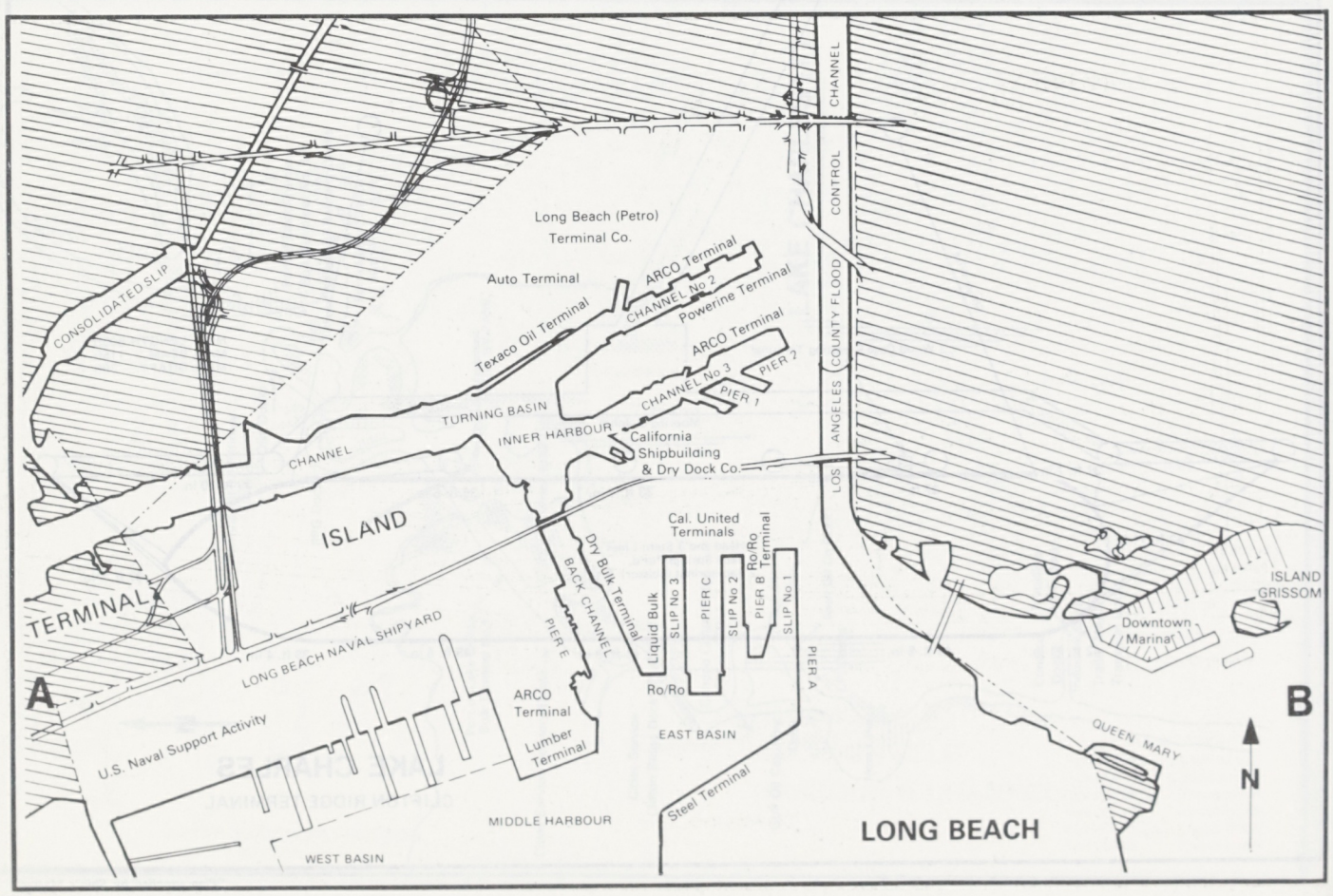
"Plan supplied by Ship's Master"

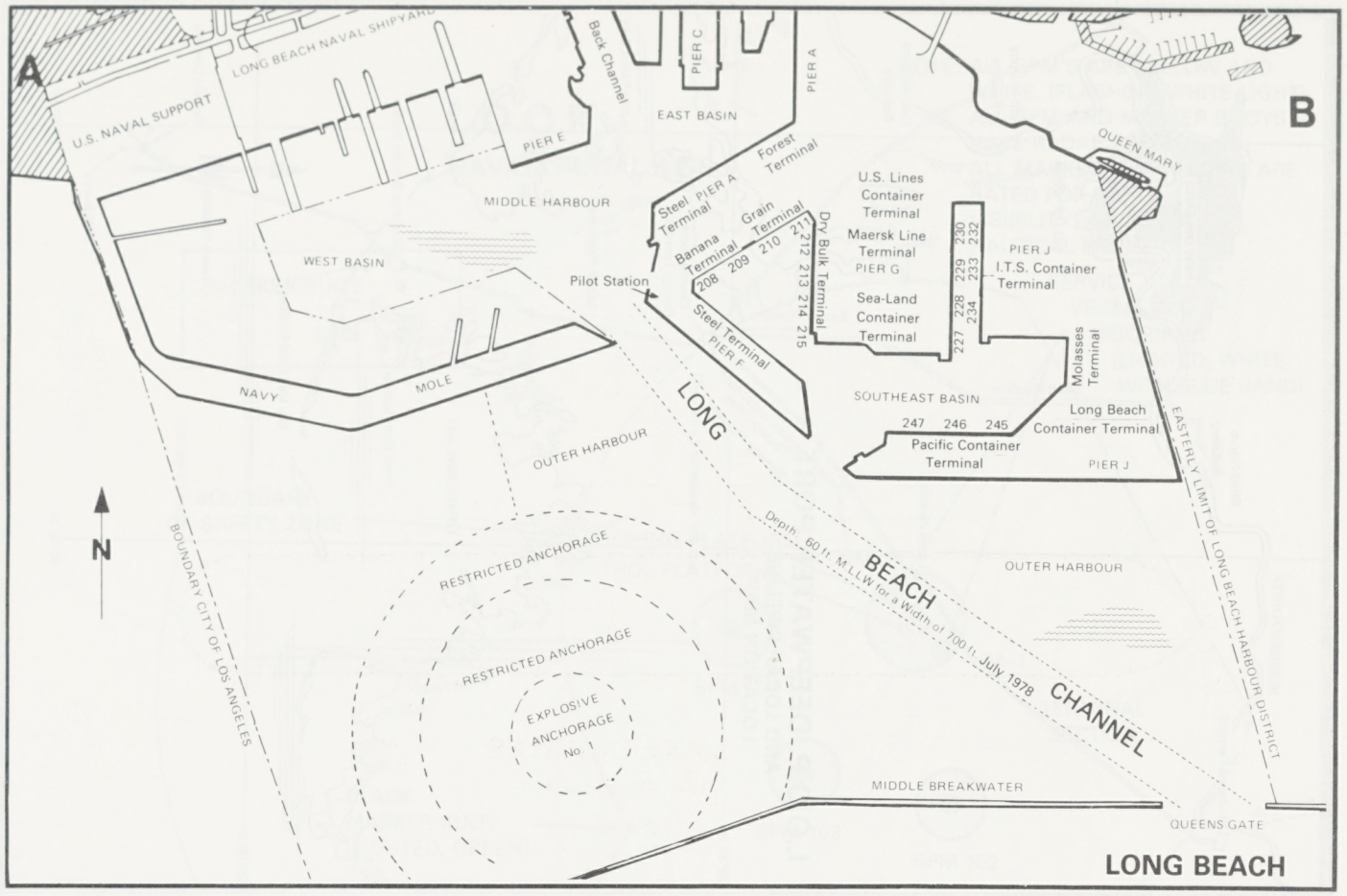


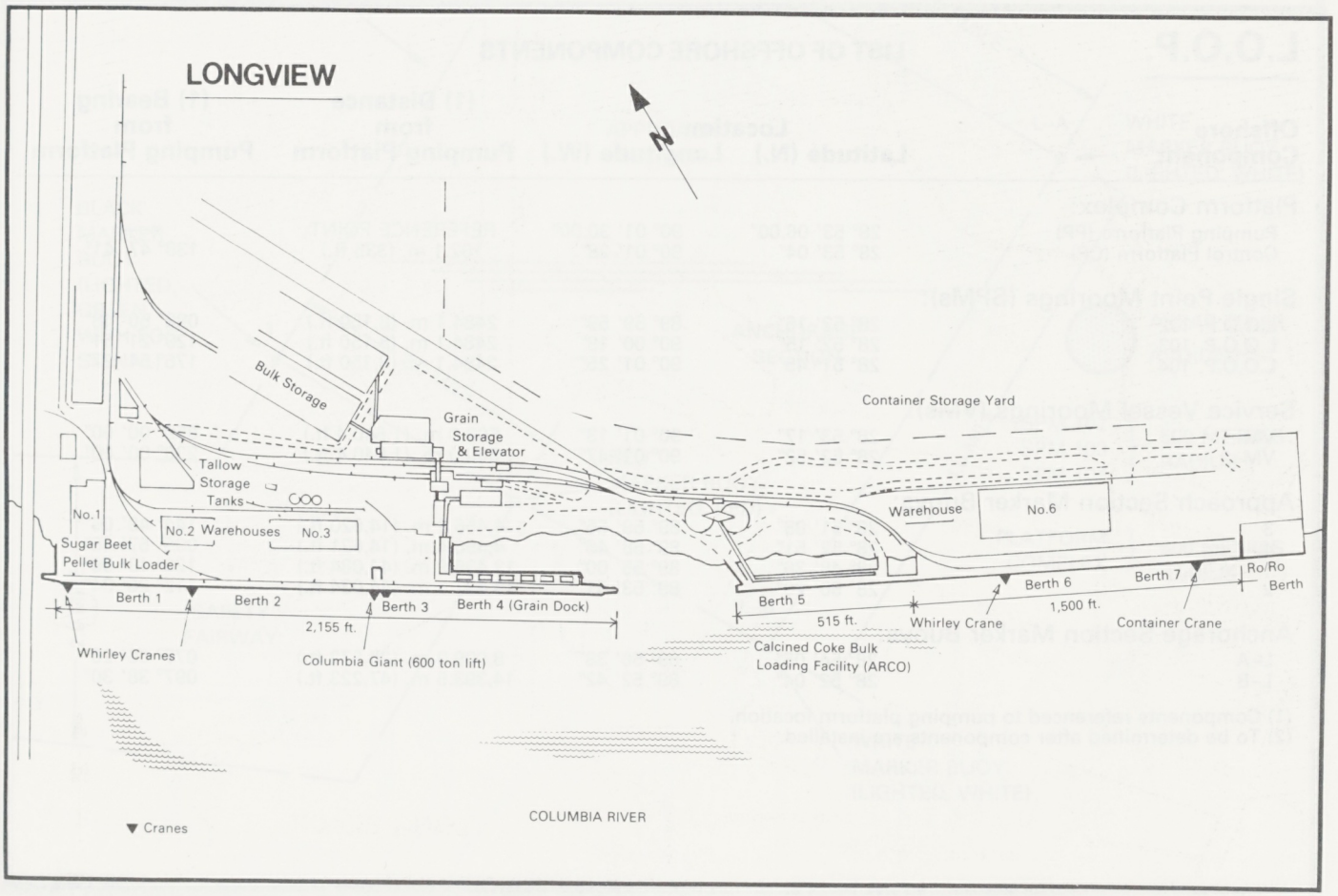
LAKE CHARLES

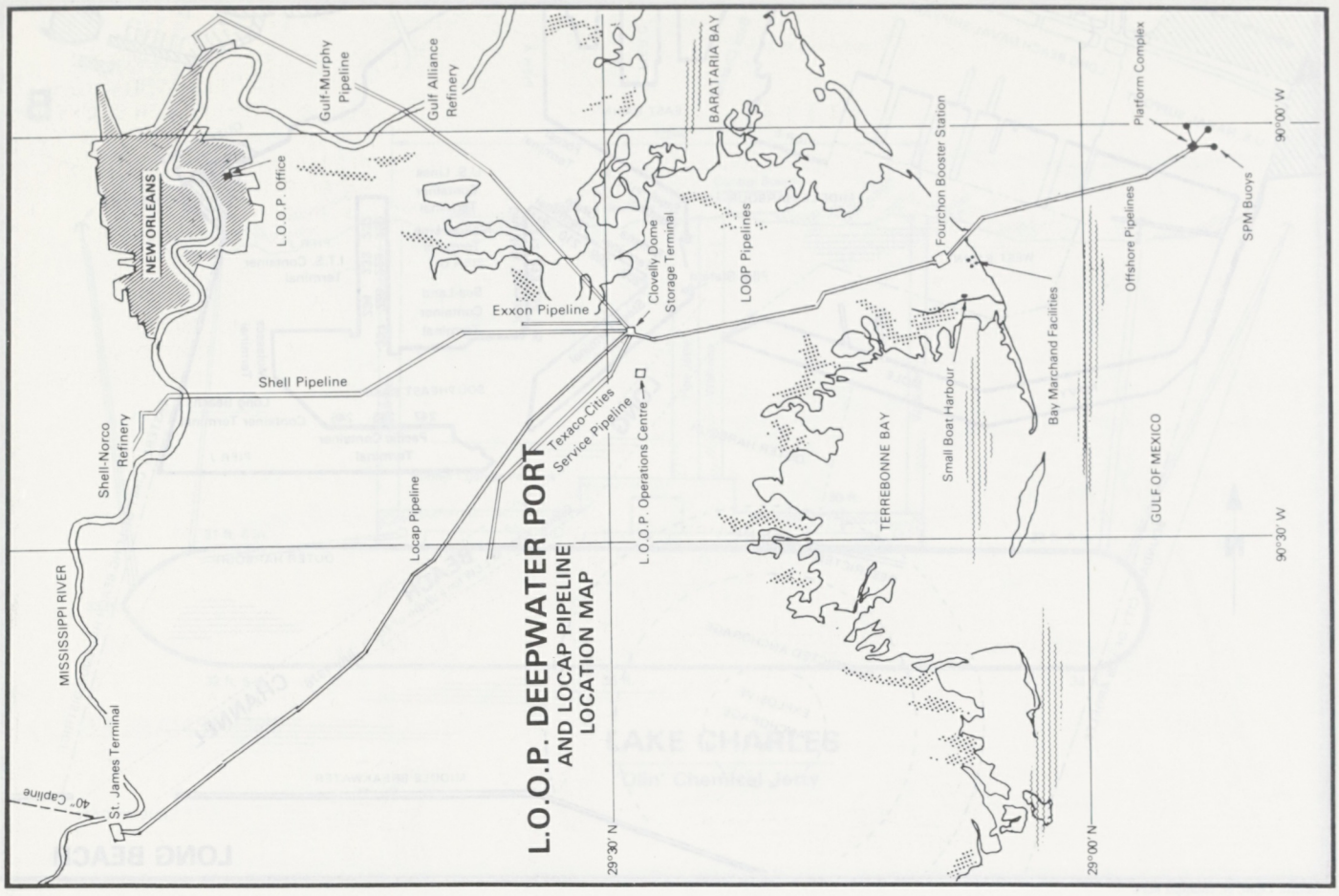
'Olin' Chemical Jetty

"Plan supplied by Ship's Master"




A
B
LONG BEACH NAVAL SHIPYARD
U.S. NAVAL SUPPORT
PIER E
Back Channel
PIER C
EAST BASIN
PIER A
Forest Terminal
QUEEN MARY
MIDDLE HARBOUR
Steel PIER A Terminal
Grain Terminal
Banana Terminal
208 209 210 211 212 213 214 215
Dry Bulk Terminal
U.S. Lines Container Terminal
Maersk Line Terminal
PIER G
230 232 229 233 228 234 227
PIER J
I.T.S. Container Terminal
WEST BASIN
Pilot Station
Sea-Land Container Terminal
Steel Terminal
PIER F
Molasses Terminal
NAVY MOLE
SOUTHEAST BASIN
Long Beach Container Terminal
247 246 245
Pacific Container Terminal
PIER J
LONG BEACH
OUTER HARBOUR
EASTERLY LIMIT OF LONG BEACH HARBOUR DISTRICT
N
BOUNDARY CITY OF LOS ANGELES
RESTRICTED ANCHORAGE
RESTRICTED ANCHORAGE
EXPLOSIVE ANCHORAGE No. 1
Depth 60 ft. M.L.L.W. for a Width of 700 ft. July 1978
CHANNEL
OUTER HARBOUR
MIDDLE BREAKWATER
QUEENS GATE
LONG BEACH


LONGVIEW
N
Bulk Storage
Grain Storage & Elevator
Container Storage Yard
Tallow Storage Tanks
No.1
No.2 Warehouses No.3
Warehouse
No.6
Sugar Beet Pellet Bulk Loader
Berth 1
Berth 2
Berth 3
Berth 4 (Grain Dock)
2,155 ft.
Berth 5
515 ft.
Berth 6
Berth 7
1,500 ft.
Ro/Ro Berth
Whirley Cranes
Columbia Giant (600 ton lift)
Whirley Crane
Container Crane
Calcined Coke Bulk Loading Facility (ARCO)
COLUMBIA RIVER
▼ Cranes

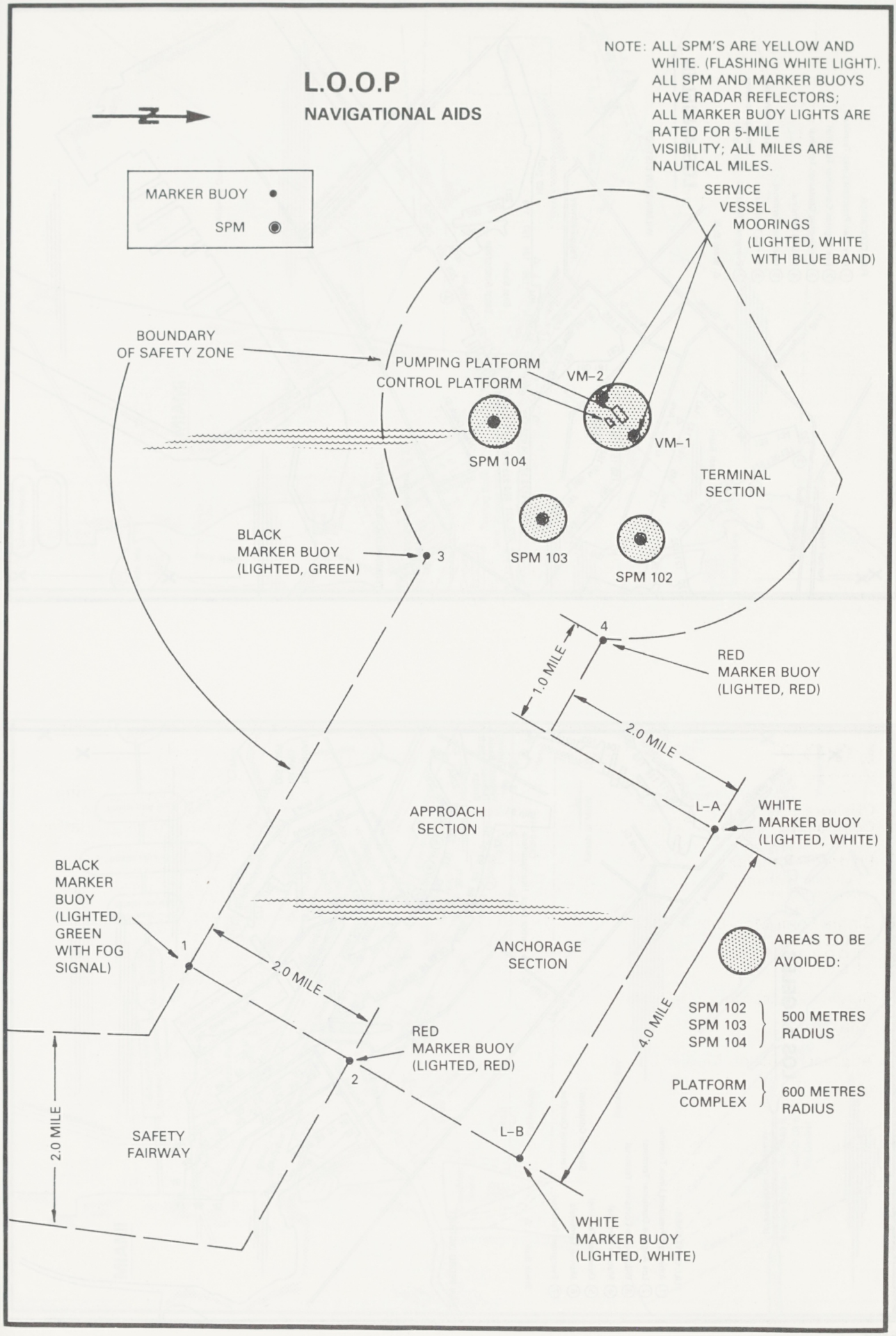


L.O.O.P.

LIST OF OFFSHORE COMPONENTS

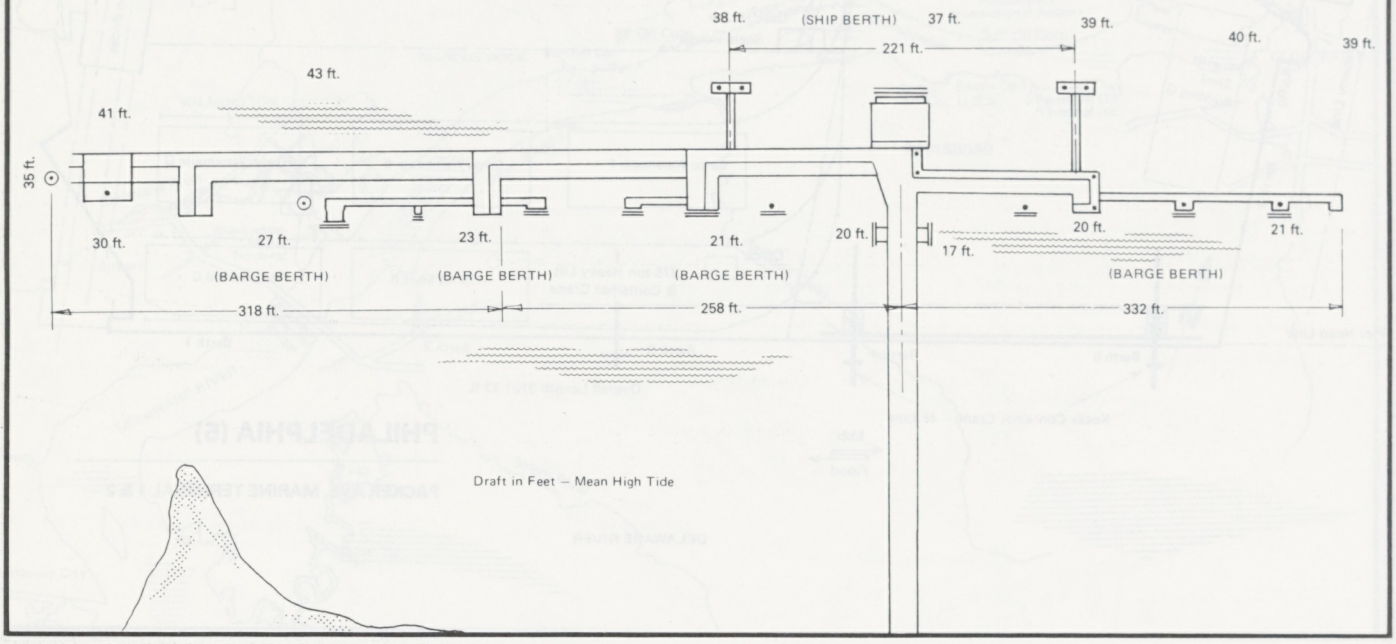
Offshore Component	Location Latitude (N.)	Location Longitude (W.)	(1) Distance from Pumping Platform	(1) Bearing from Pumping Platform
Platform Complex:				
Pumping Platform (PP)	28° 53′ 06.00″	90° 01′ 30.00″	REFERENCE POINT	—
Control Platform (CP)	28° 53′ 04″	90° 01′ 28″	102.1 m. (335 ft.)	138° 47′ 41″
Single Point Moorings (SPMs):				
L.O.O.P. 102	28° 53′ 16″	89° 59′ 59″	2484.1 m. (8,150 ft.)	082° 50′ 48″
L.O.O.P. 103	28° 52′ 15″	90° 00′ 19″	2484.1 m. (8,150 ft.)	129° 21′ 51″
L.O.O.P. 104	28° 51′ 45″	90° 01′ 25″	2484.1 m. (8,150 ft.)	176° 54′ 27″
Service Vessel Moorings (VMs):				
VM–1	28° 53′ 17″	90° 01′ 13″	500.0 m. (1,640.4 ft.)	050° 00′ 00″
VM–2	28° 52′ 52″	90° 01′ 47″	500.0 m. (1,640.4 ft.)	230° 00′ 00″
Approach Section Marker Buoys:				
3	28° 51′ 08″	89° 59′ 55″	4,456.2 m. (14,620 ft.)	144° 49′ 06″
4	28° 52′ 51″	89° 58′ 46″	4,456.4 m. (14,621 ft.)	095° 57′ 46″
1	28° 48′ 36″	89° 55′ 00″	13,436.9 m. (44,084 ft.)	128° 19′ 56″
2	28° 50′ 20″	89° 53′ 51″	13,421.5 m. (44,034 ft.)	112° 26′ 34″
Anchorage Section Marker Buoys:				
L–A	28° 54′ 05″	89° 56′ 38″	8,099.0 m. (26,572 ft.)	077° 00′ 20″
L–B	28° 52′ 04″	89° 52′ 42″	14,393.5 m. (47,223 ft.)	097° 38′ 30″

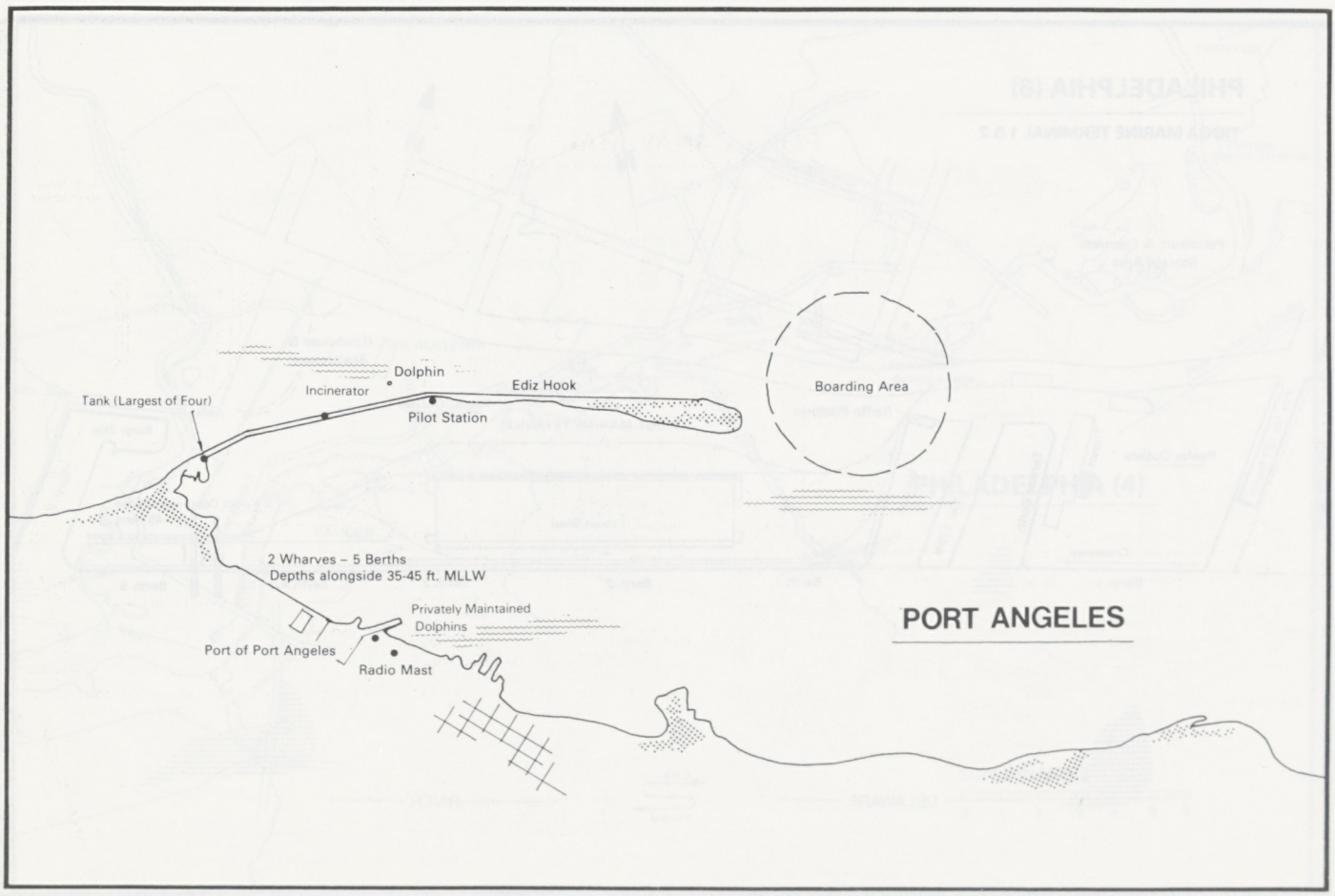
(1) Components referenced to pumping platform location.
(2) To be determined after components are installed.


L.O.O.P
NAVIGATIONAL AIDS
NOTE: ALL SPM'S ARE YELLOW AND WHITE. (FLASHING WHITE LIGHT). ALL SPM AND MARKER BUOYS HAVE RADAR REFLECTORS; ALL MARKER BUOY LIGHTS ARE RATED FOR 5-MILE VISIBILITY; ALL MILES ARE NAUTICAL MILES.
MARKER BUOY
SPM
SERVICE VESSEL MOORINGS (LIGHTED, WHITE WITH BLUE BAND)
BOUNDARY OF SAFETY ZONE
PUMPING PLATFORM
CONTROL PLATFORM
VM–2
VM–1
SPM 104
TERMINAL SECTION
SPM 103
SPM 102
BLACK MARKER BUOY (LIGHTED, GREEN)
3
4
1.0 MILE
RED MARKER BUOY (LIGHTED, RED)
2.0 MILE
L–A
WHITE MARKER BUOY (LIGHTED, WHITE)
APPROACH SECTION
BLACK MARKER BUOY (LIGHTED, GREEN WITH FOG SIGNAL)
1
2.0 MILE
ANCHORAGE SECTION
AREAS TO BE AVOIDED:
SPM 102
SPM 103
SPM 104
500 METRES RADIUS
4.0 MILE
PLATFORM COMPLEX
600 METRES RADIUS
RED MARKER BUOY (LIGHTED, RED)
2
2.0 MILE
SAFETY FAIRWAY
L–B
WHITE MARKER BUOY (LIGHTED, WHITE)

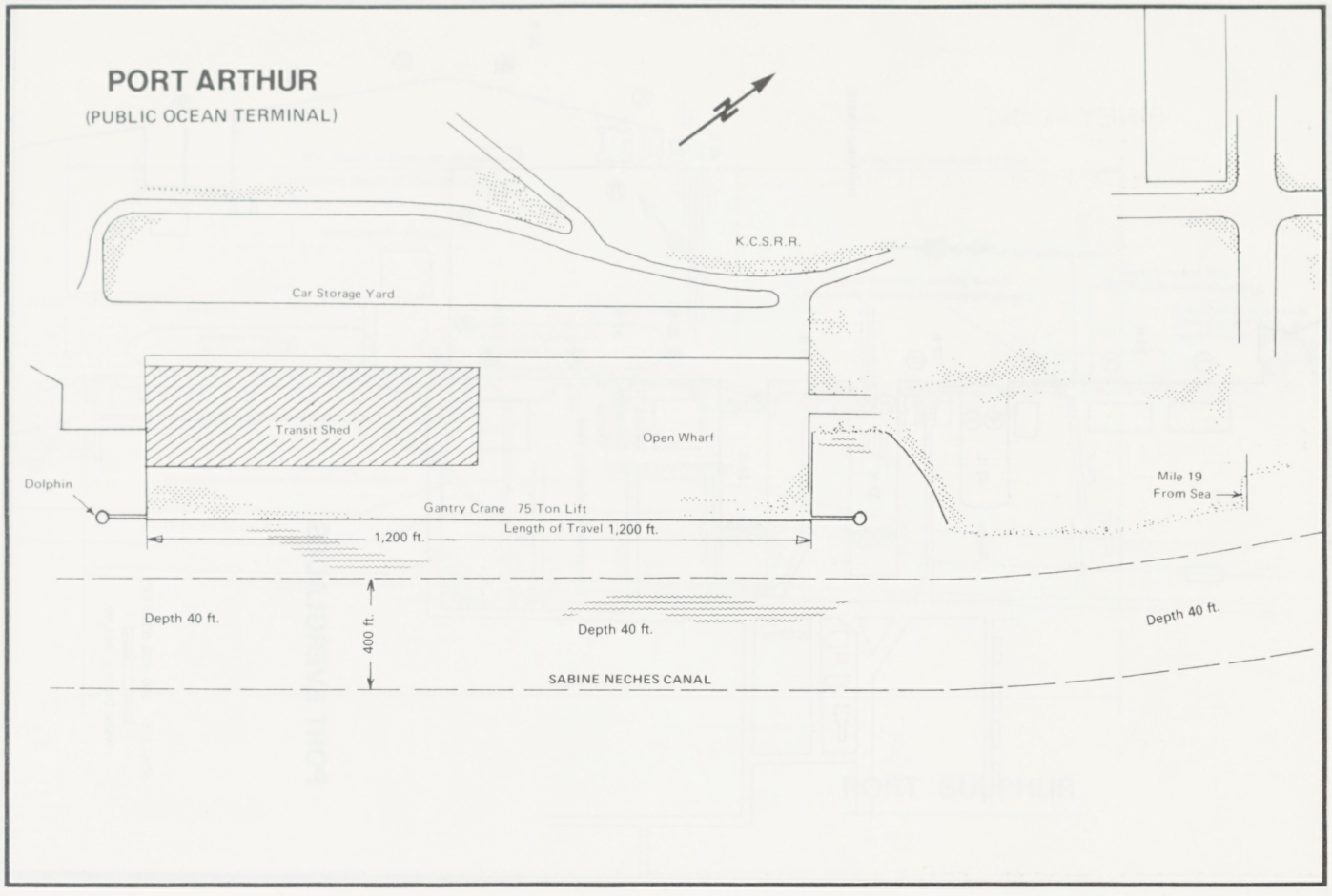
PINEY POINT

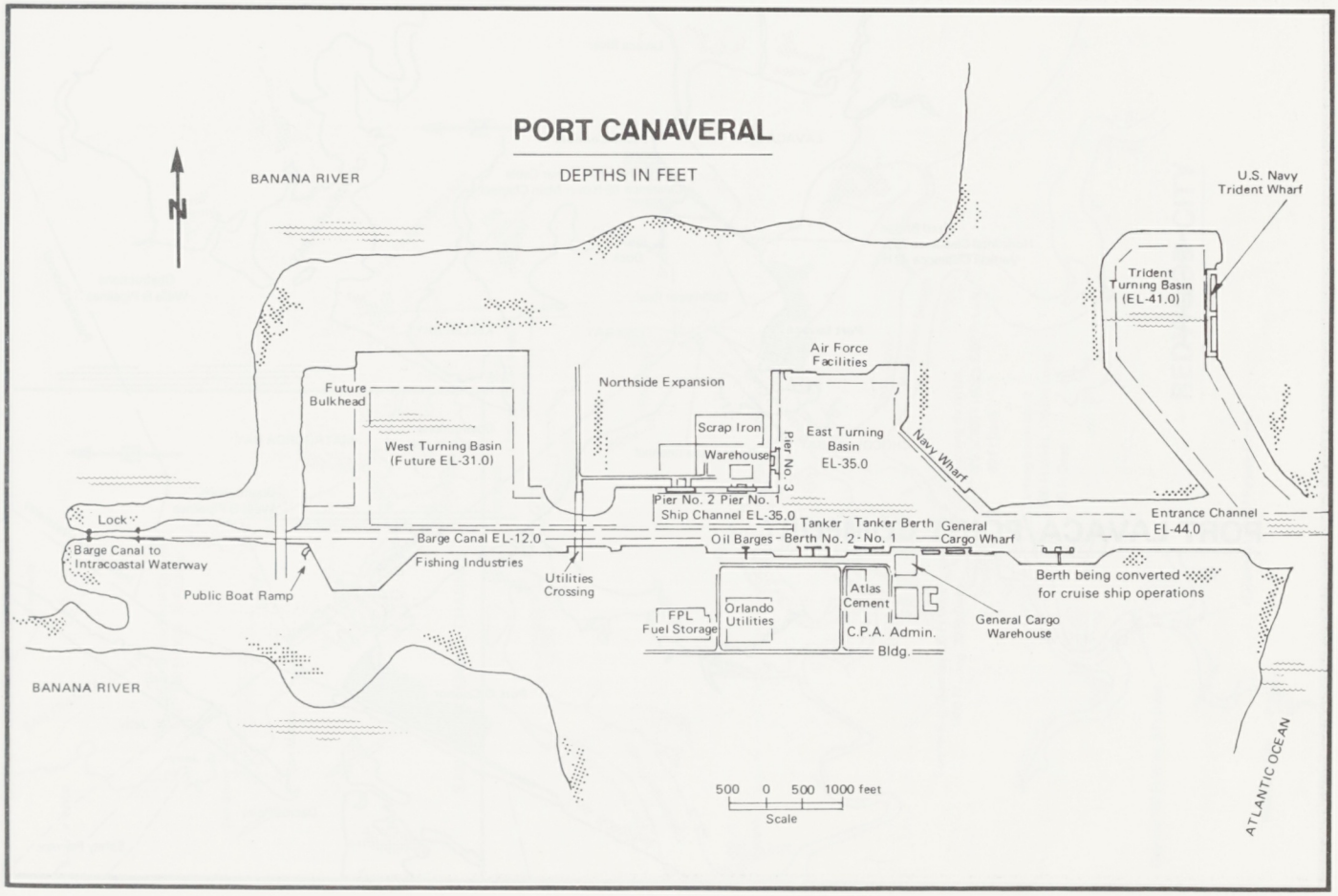
STEUART PETROLEUM CO. TERMINAL

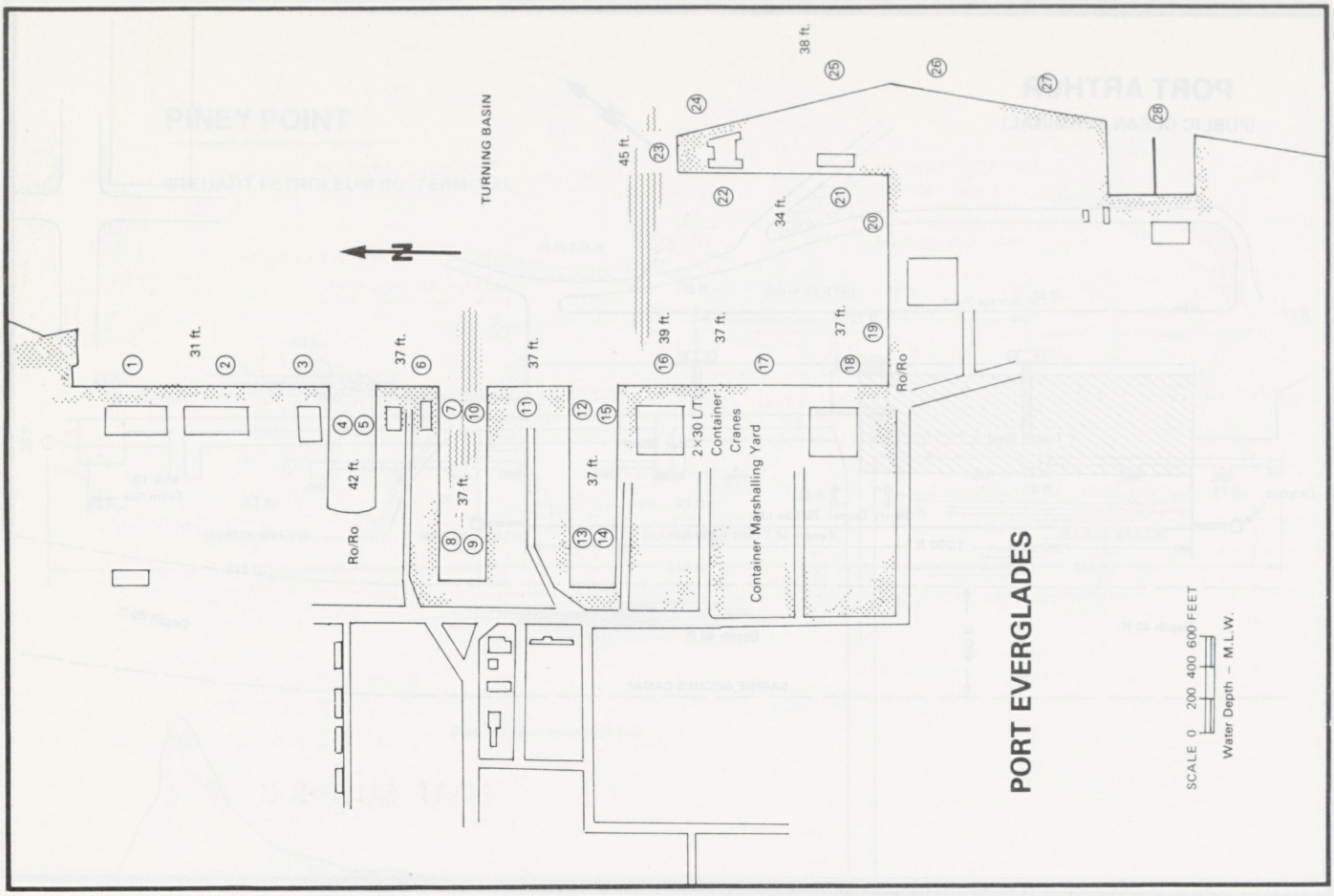


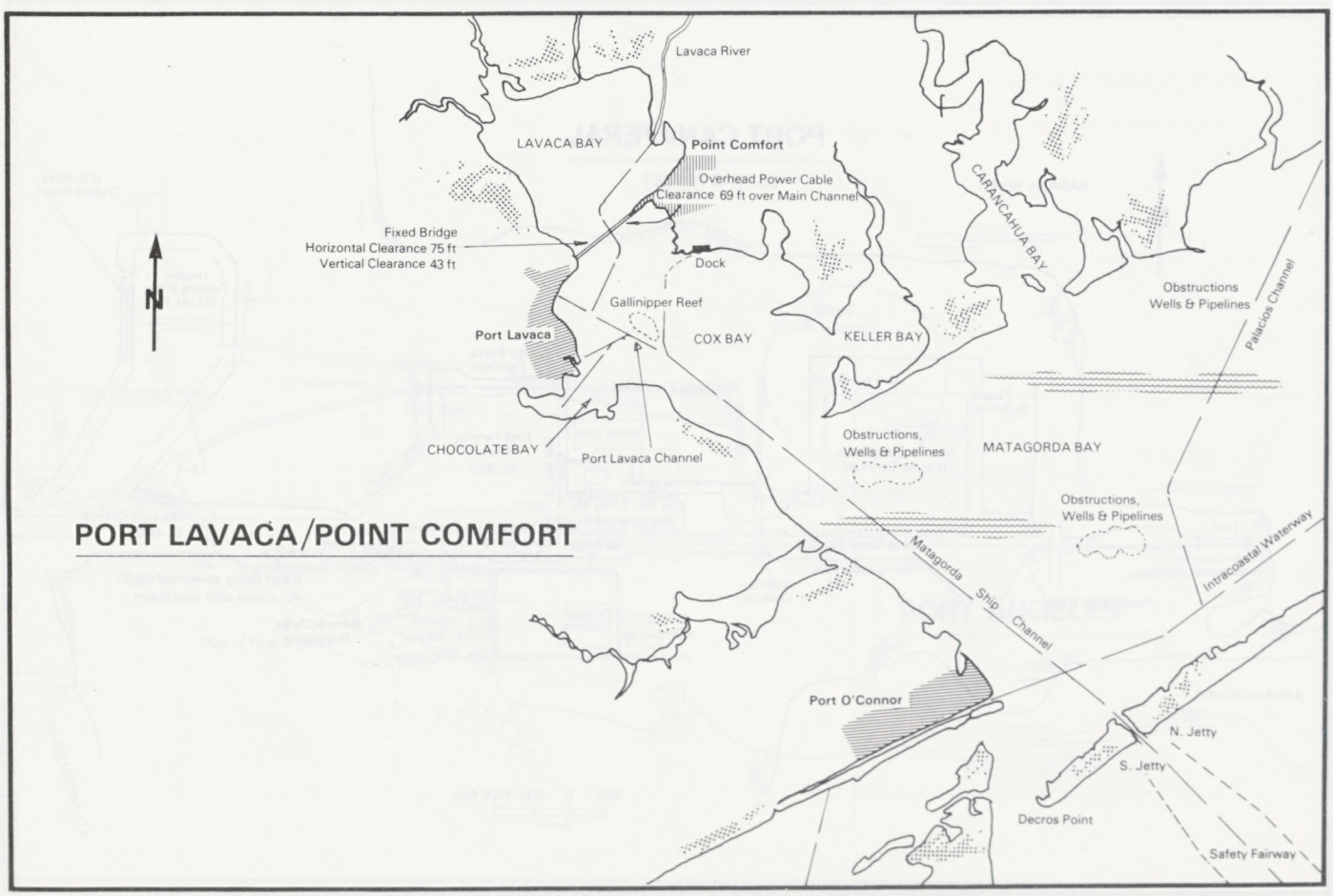


PORT ANGELES

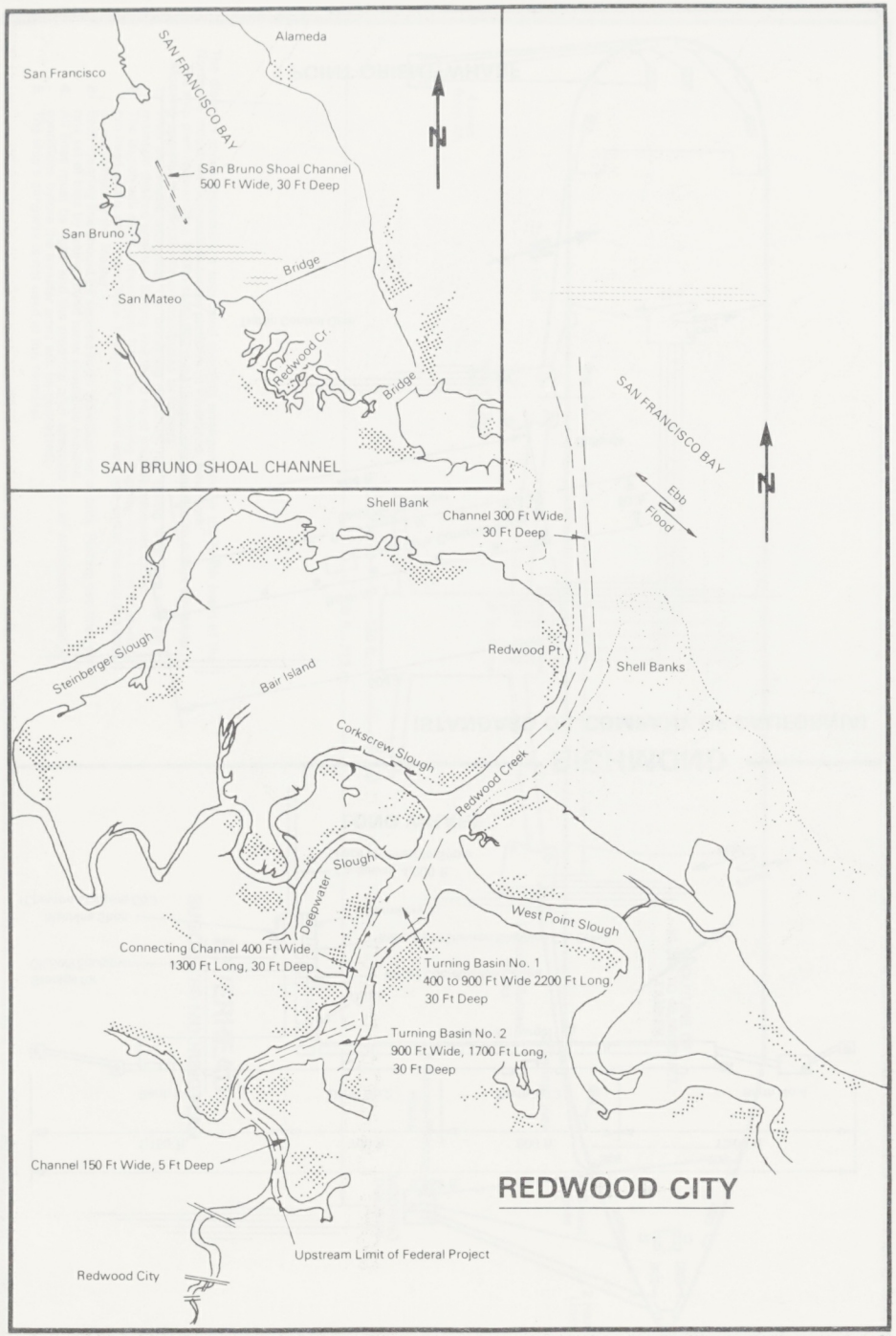

PORT ARTHUR
(PUBLIC OCEAN TERMINAL)
K.C.S.R.R.
Car Storage Yard
Transit Shed
Open Wharf
Dolphin
Gantry Crane 75 Ton Lift
1,200 ft.
Length of Travel 1,200 ft.
Mile 19
From Sea
Depth 40 ft.
400 ft.
Depth 40 ft.
Depth 40 ft.
SABINE NECHES CANAL

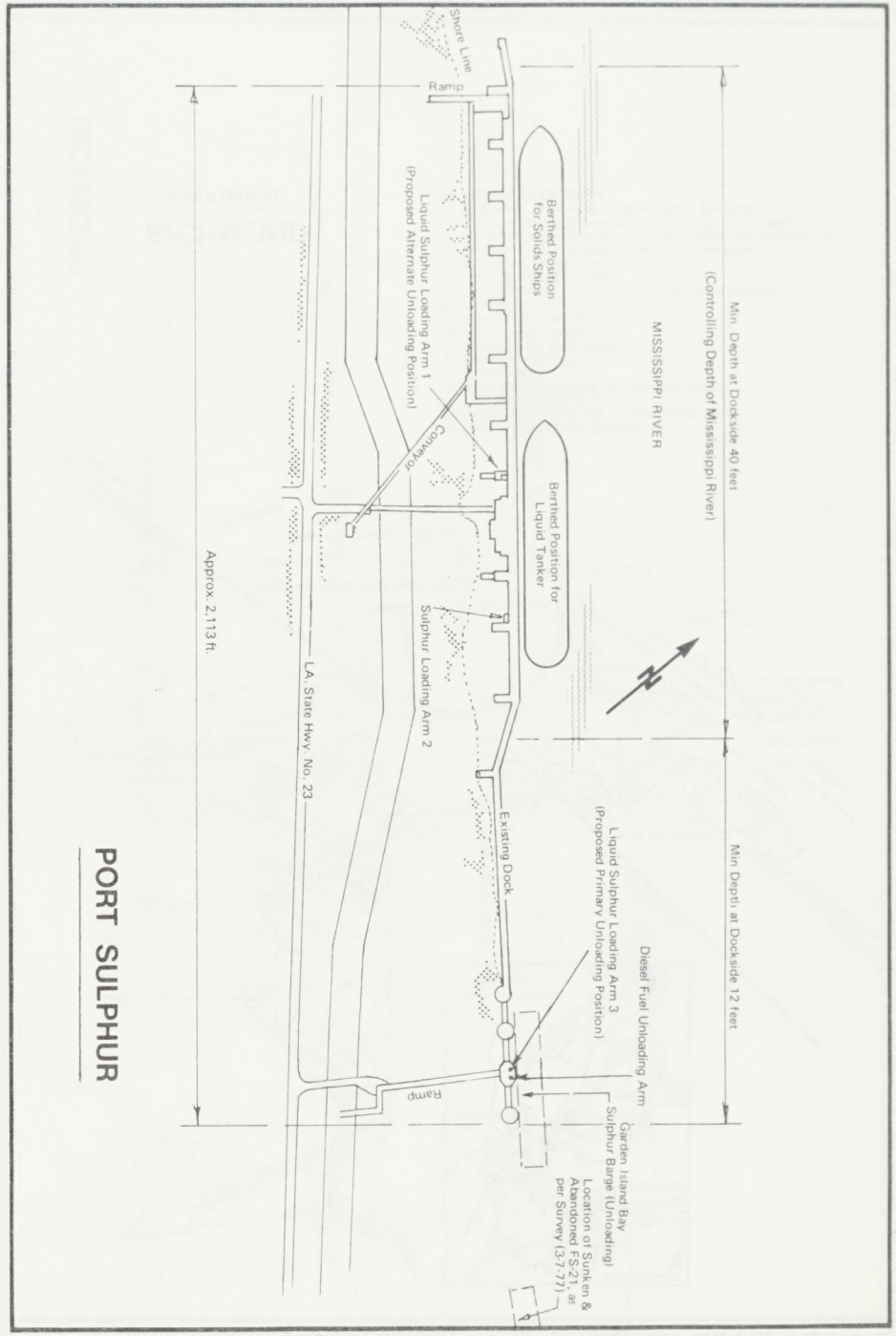

PORT CANAVERAL
DEPTHS IN FEET
BANANA RIVER
U.S. Navy
Trident Wharf
Trident
Turning Basin
(EL-41.0)
Air Force
Facilities
Northside Expansion
Future
Bulkhead
West Turning Basin
(Future EL-31.0)
Scrap Iron
Warehouse
Pier No. 3
East Turning
Basin
EL-35.0
Navy Wharf
Pier No. 2 Pier No. 1
Ship Channel EL-35.0
Tanker Tanker Berth
Oil Barges Berth No. 2 No. 1
General
Cargo Wharf
Entrance Channel
EL-44.0
Lock
Barge Canal to
Intracoastal Waterway
Barge Canal EL-12.0
Fishing Industries
Public Boat Ramp
Utilities
Crossing
FPL
Fuel Storage
Orlando
Utilities
Atlas
Cement
C.P.A. Admin.
Bldg.
General Cargo
Warehouse
Berth being converted
for cruise ship operations
BANANA RIVER
ATLANTIC OCEAN
500 0 500 1000 feet
Scale

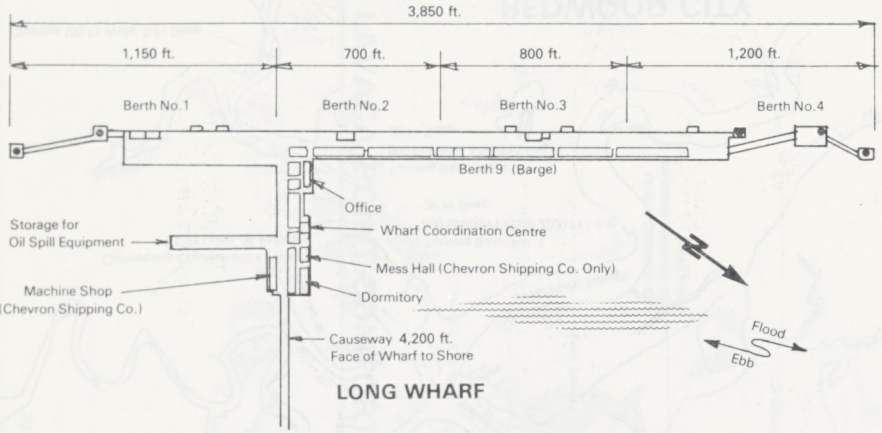




PORT LAVACA/POINT COMFORT


San Francisco
SAN FRANCISCO BAY
Alameda
San Bruno Shoal Channel
500 Ft Wide, 30 Ft Deep
San Bruno
Bridge
San Mateo
Redwood Cr
Bridge
SAN BRUNO SHOAL CHANNEL
SAN FRANCISCO BAY
Ebb
Flood
Shell Bank
Channel 300 Ft Wide,
30 Ft Deep
Steinberger Slough
Bair Island
Redwood Pt
Shell Banks
Corkscrew Slough
Redwood Creek
Deepwater Slough
West Point Slough
Connecting Channel 400 Ft Wide,
1300 Ft Long, 30 Ft Deep
Turning Basin No. 1
400 to 900 Ft Wide 2200 Ft Long,
30 Ft Deep
Turning Basin No. 2
900 Ft Wide, 1700 Ft Long,
30 Ft Deep
Channel 150 Ft Wide, 5 Ft Deep
REDWOOD CITY
Upstream Limit of Federal Project
Redwood City

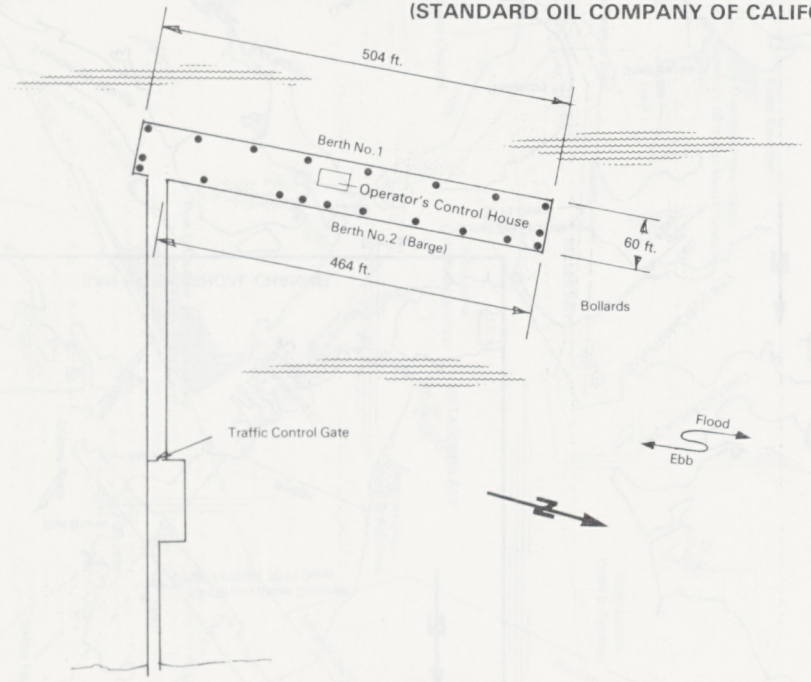

PORT SULPHUR
Shore Line
Ramp
Min. Depth at Dockside 40 feet
(Controlling Depth of Mississippi River)
MISSISSIPPI RIVER
Min Depth at Dockside 12 feet
Berthed Position
for Solids Ships
Liquid Sulphur Loading Arm 1
(Proposed Alternate Unloading Position)
Conveyor
Berthed Position for
Liquid Tanker
Sulphur Loading Arm 2
Approx. 2,113 ft.
LA. State Hwy. No. 23
Existing Dock
Liquid Sulphur Loading Arm 3
(Proposed Primary Unloading Position)
Diesel Fuel Unloading Arm
Garden Island Bay
Sulphur Barge (Unloading)
Location of Sunken &
Abandoned FS-21, as
per Survey (3-7-77)
Ramp



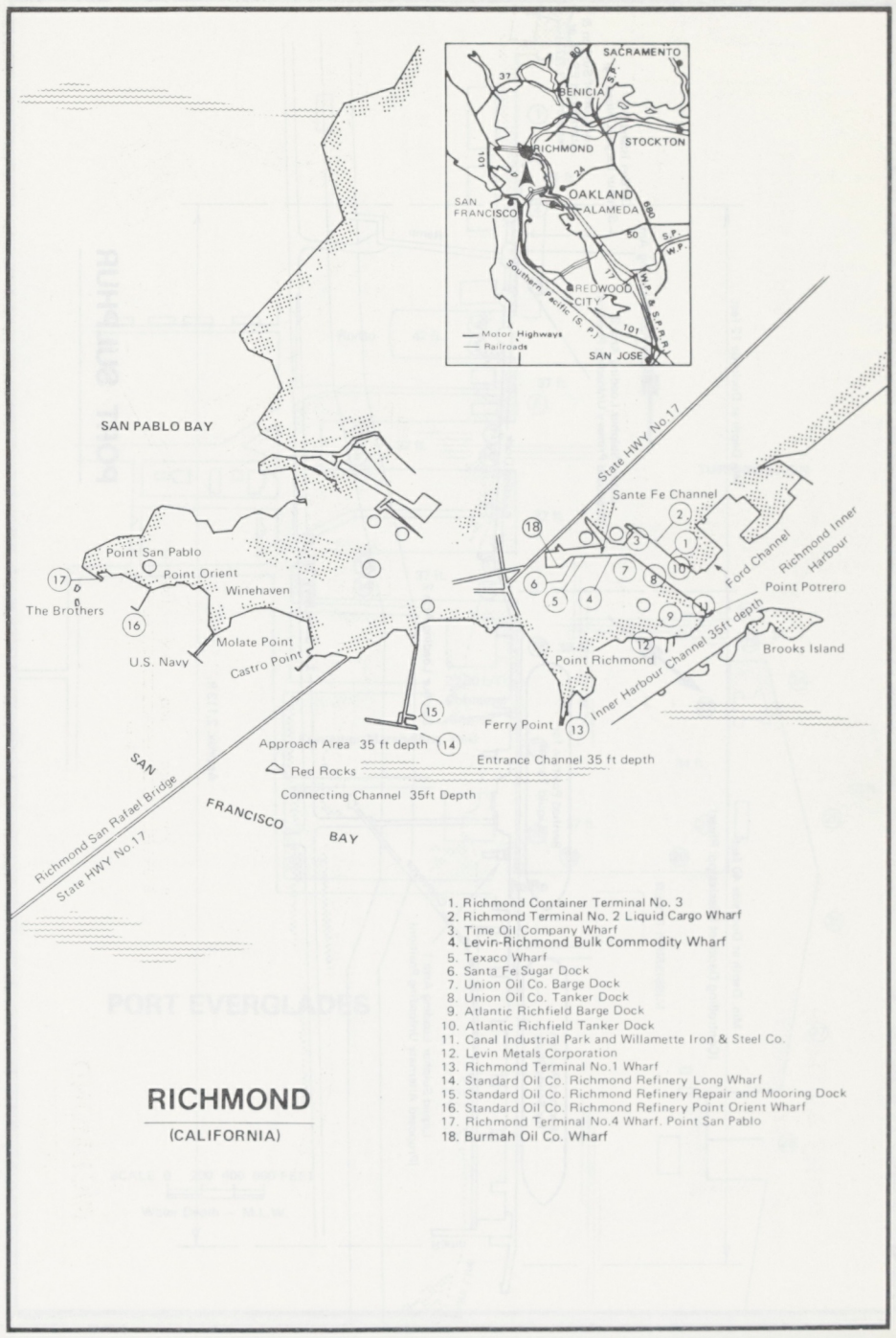
LONG WHARF

RICHMOND

(STANDARD OIL COMPANY OF CALIFORNIA)



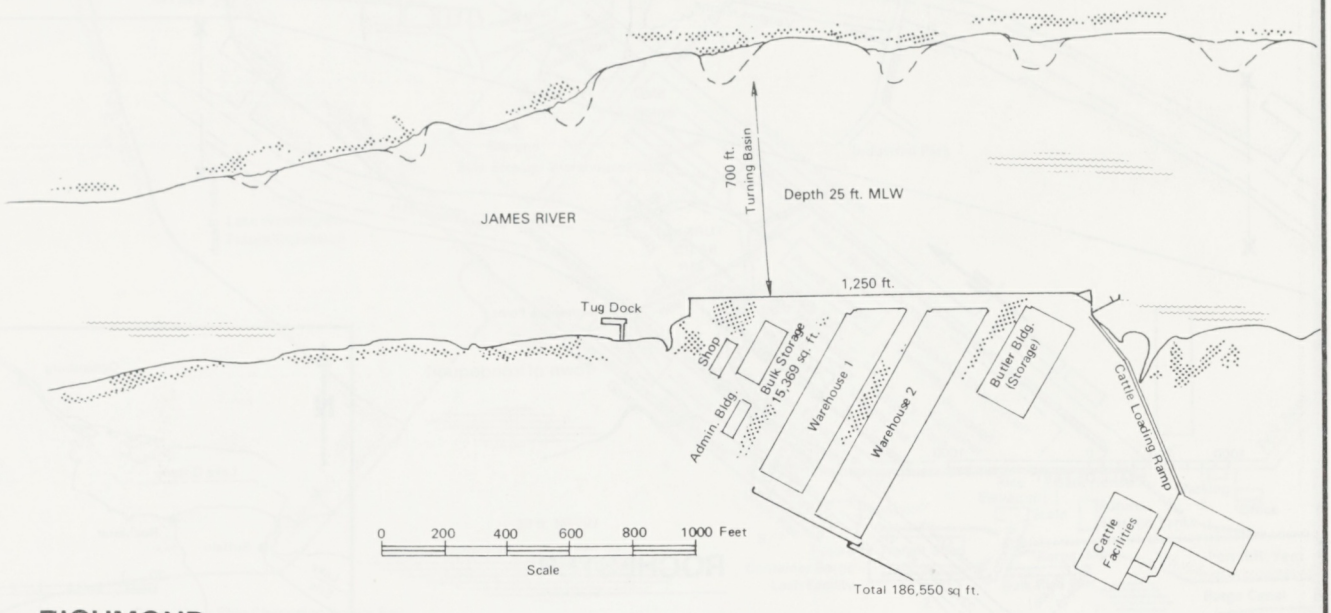
POINT ORIENT WHARF



1. Richmond Container Terminal No. 3
2. Richmond Terminal No. 2 Liquid Cargo Wharf
3. Time Oil Company Wharf
4. Levin-Richmond Bulk Commodity Wharf
5. Texaco Wharf
6. Santa Fe Sugar Dock
7. Union Oil Co. Barge Dock
8. Union Oil Co. Tanker Dock
9. Atlantic Richfield Barge Dock
10. Atlantic Richfield Tanker Dock
11. Canal Industrial Park and Willamette Iron & Steel Co.
12. Levin Metals Corporation
13. Richmond Terminal No.1 Wharf
14. Standard Oil Co. Richmond Refinery Long Wharf
15. Standard Oil Co. Richmond Refinery Repair and Mooring Dock
16. Standard Oil Co. Richmond Refinery Point Orient Wharf
17. Richmond Terminal No.4 Wharf, Point San Pablo
18. Burmah Oil Co. Wharf

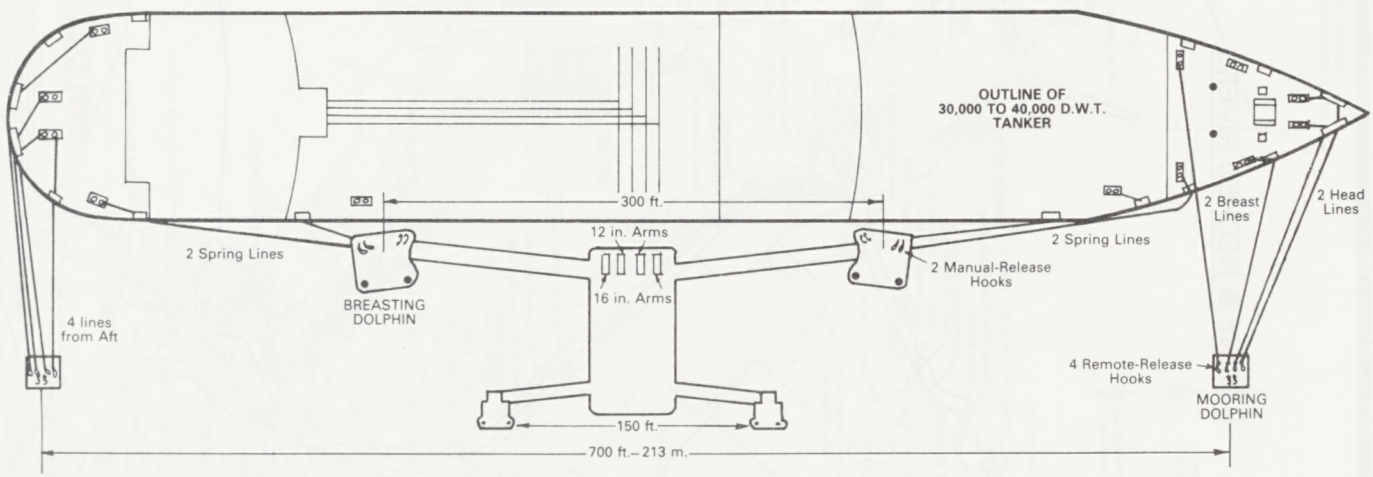
RICHMOND

(CALIFORNIA)



RICHMOND

VIRGINIA



RIVERHEAD

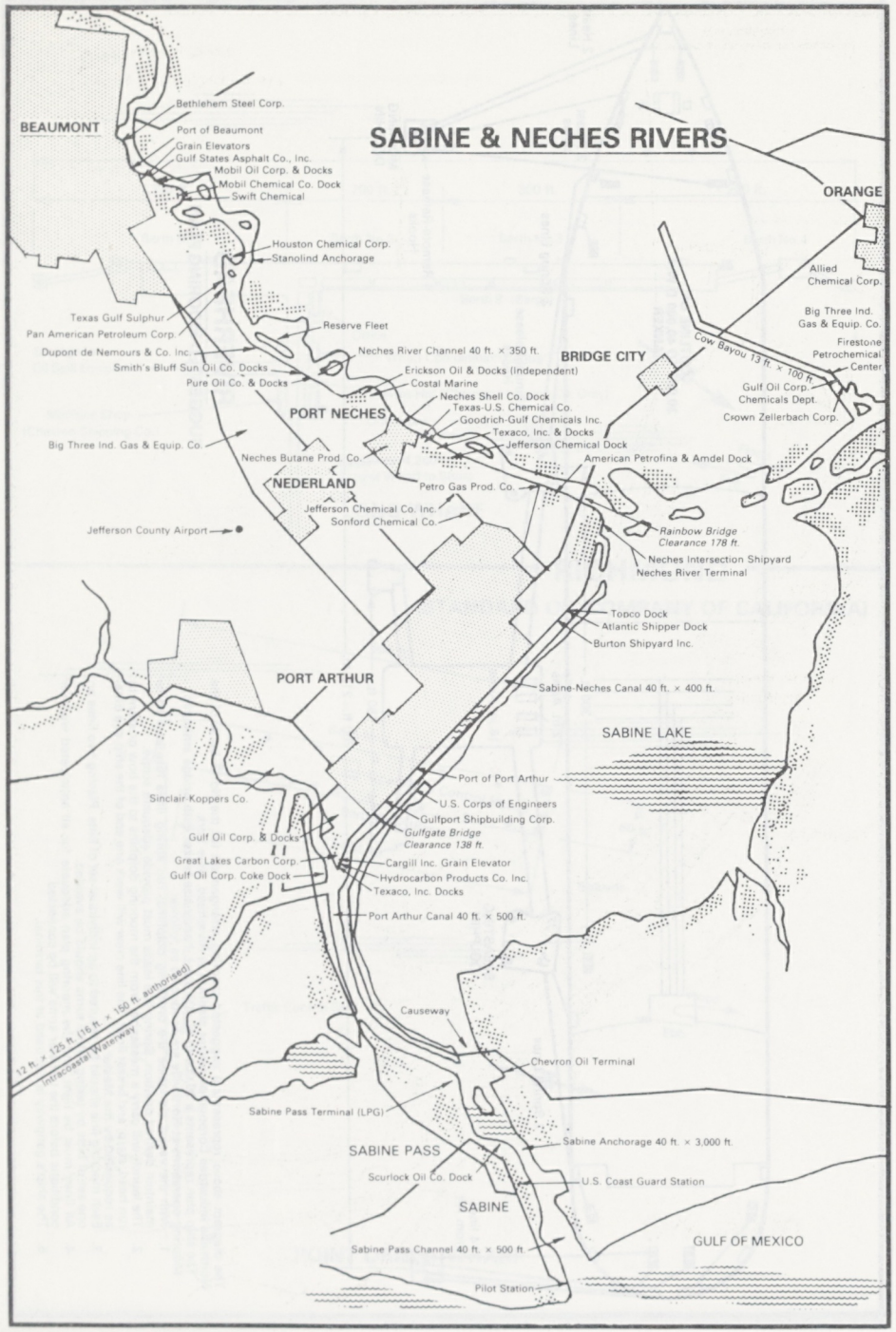
SUGGESTED MOORING PLAN

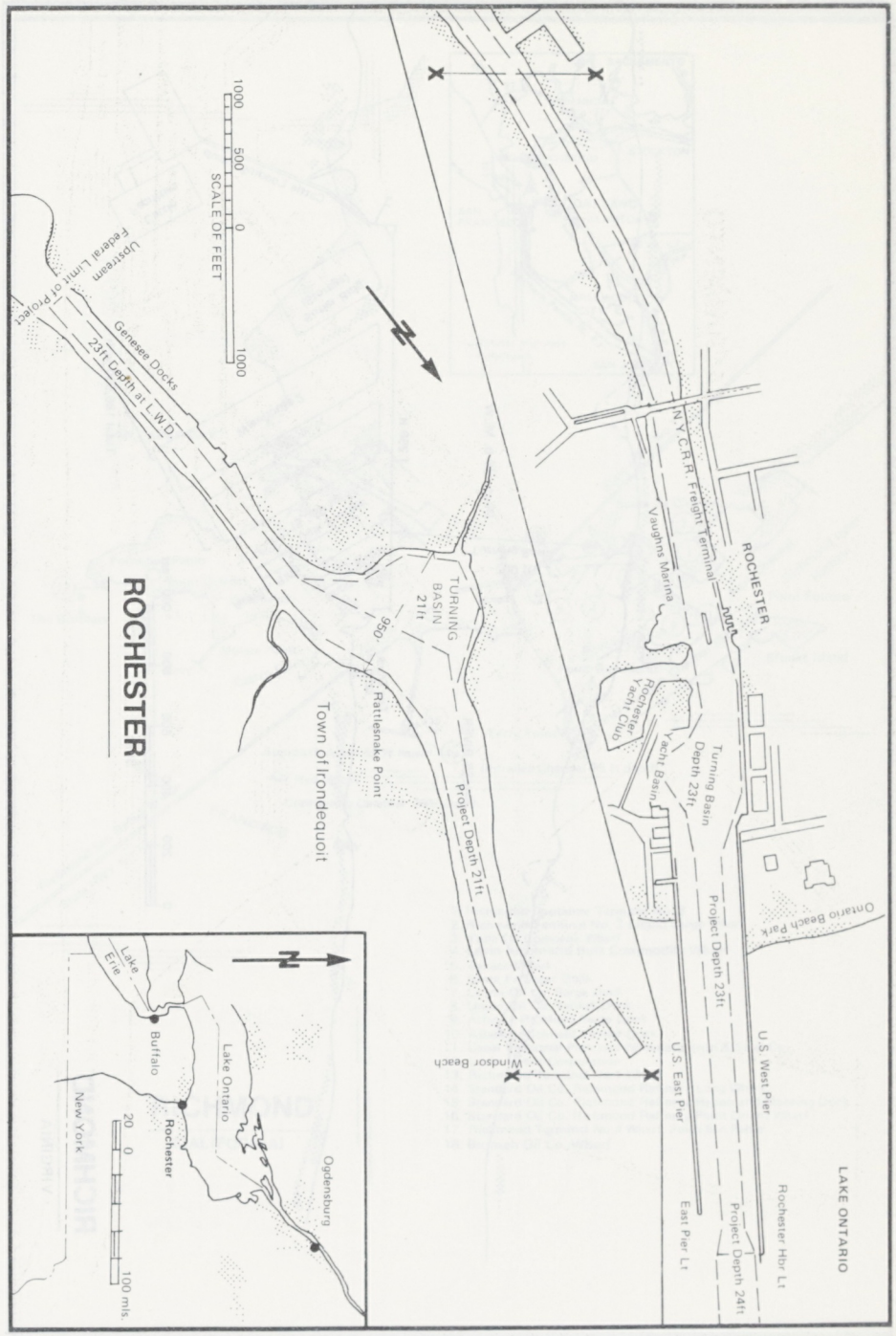
The diagram above represents a suggested mooring arrangement for the North berth of the Northville Industries Corporation tanker platform at Riverhead, New York.

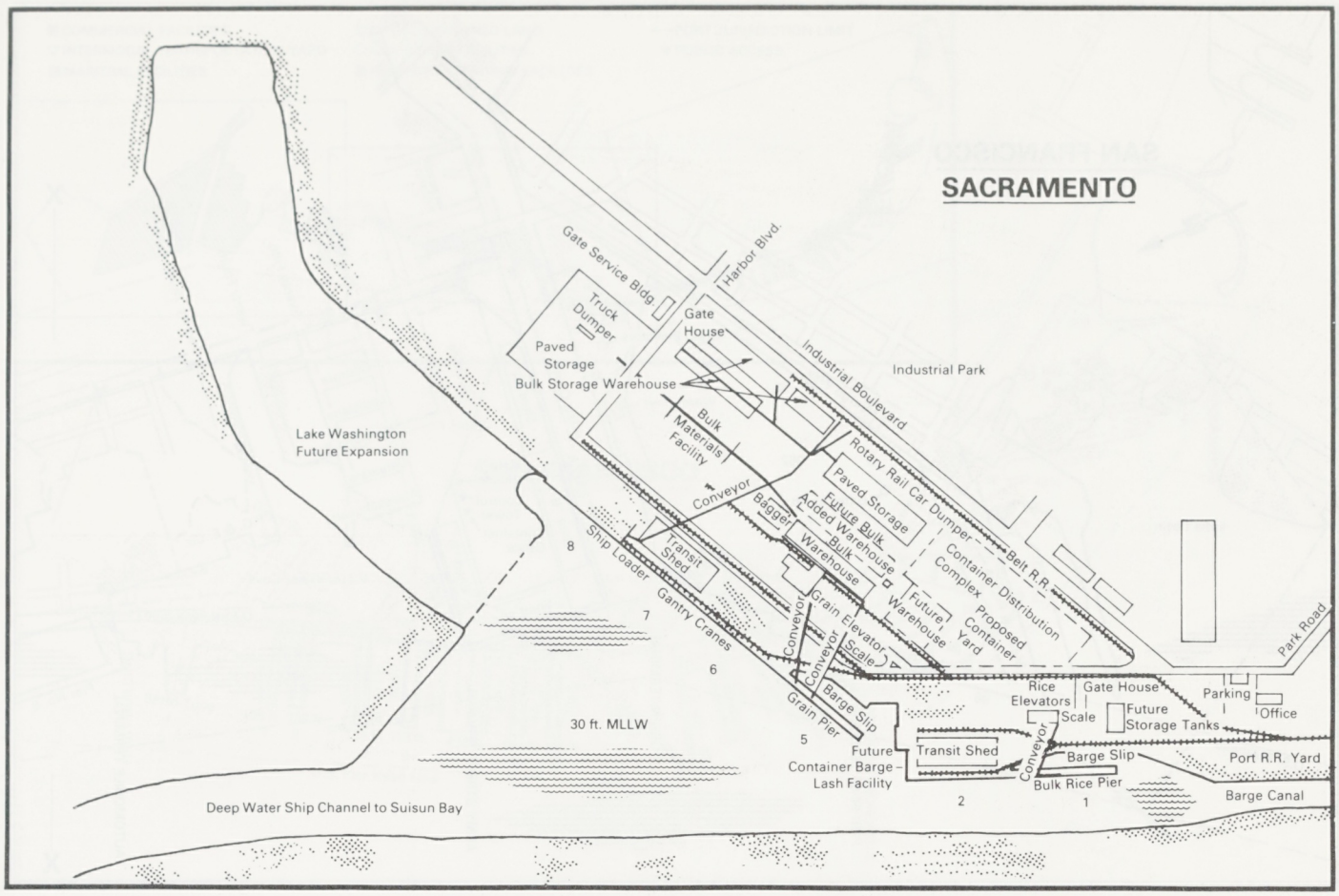
The ship plan represents a 30,000 to 40,000 d.w.t. handy size tanker with bridge amidship.

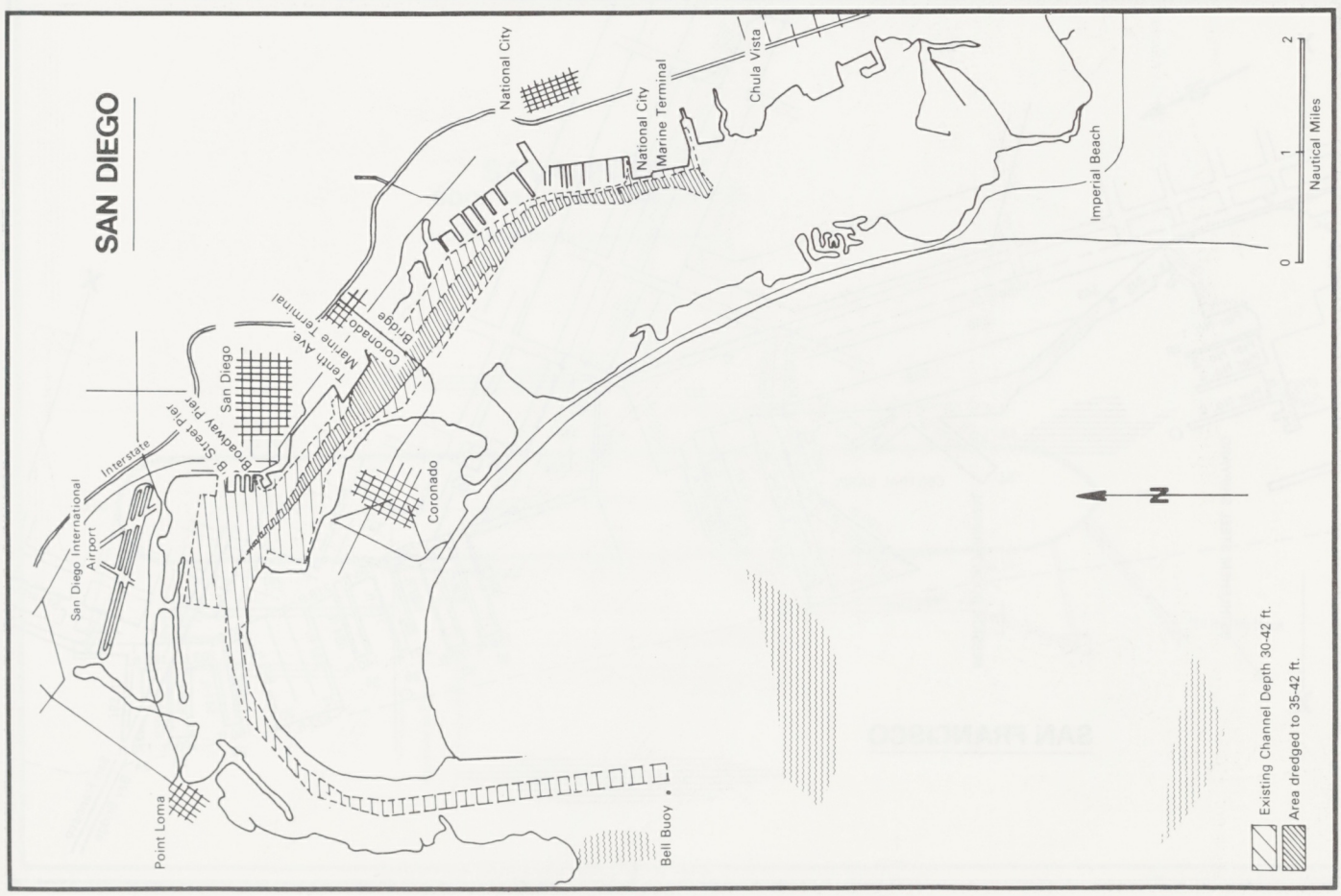
Mooring operations at Northville are conducted as follows:

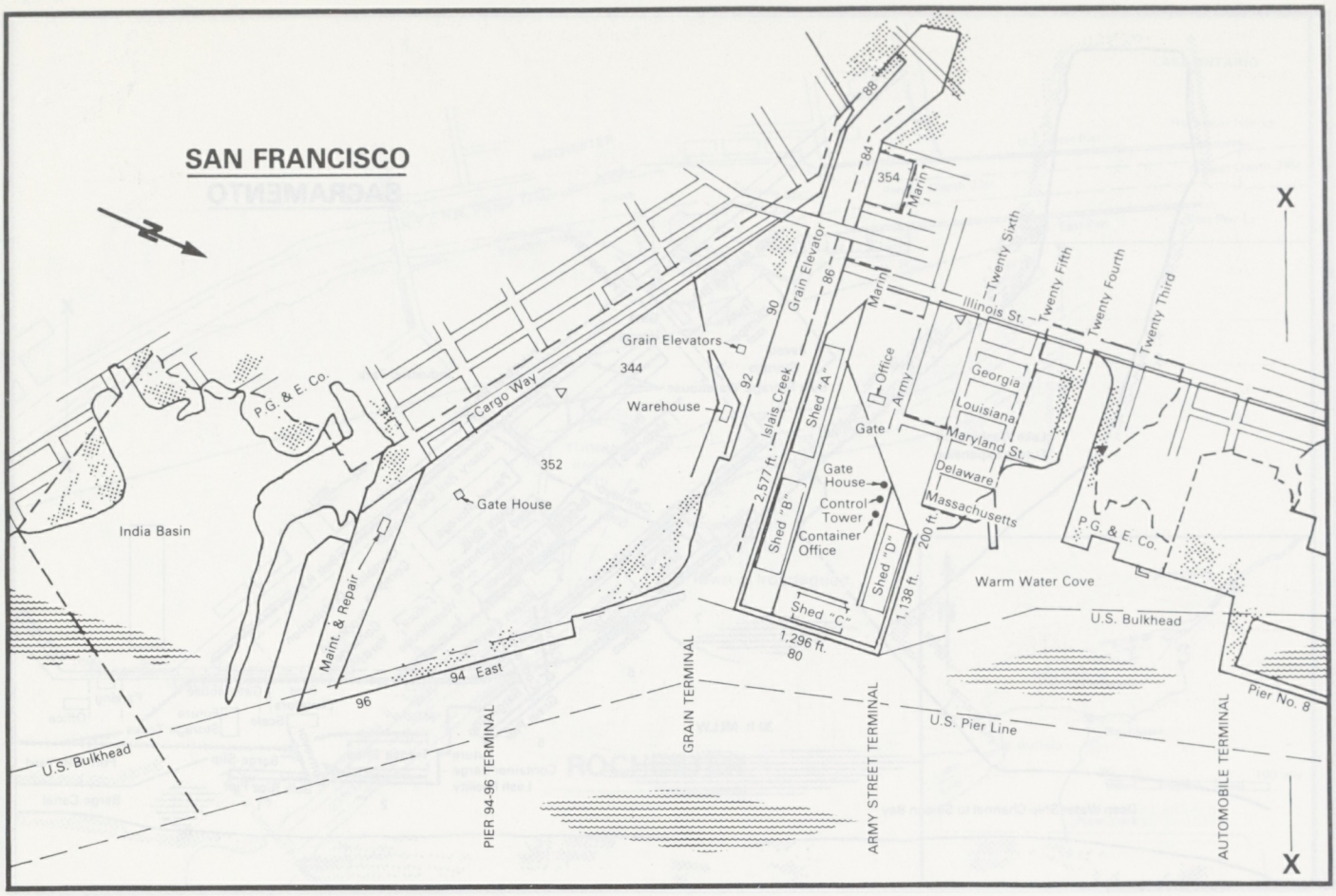
1. With the vessel alongside the breasting dolphins, run spring lines fore and aft to maintain desired position. Spring line leads must provide adequate scope.
2. The launch will carry a messenger from the mooring dolphins to the bow or stern to run head, stern, and breast lines. The line crew will work one end of the ship at a time, as requested by the Master.
3. Each mooring line should be secured to an individual set of bitts. Placing two lines on one set of bitts by taking round turns should be avoided.
4. All lines must be tight, and the mooring plan adequate for all anticipated weather conditions before the transfer arms will be connected.
5. The ship's gangway is not used at this terminal.

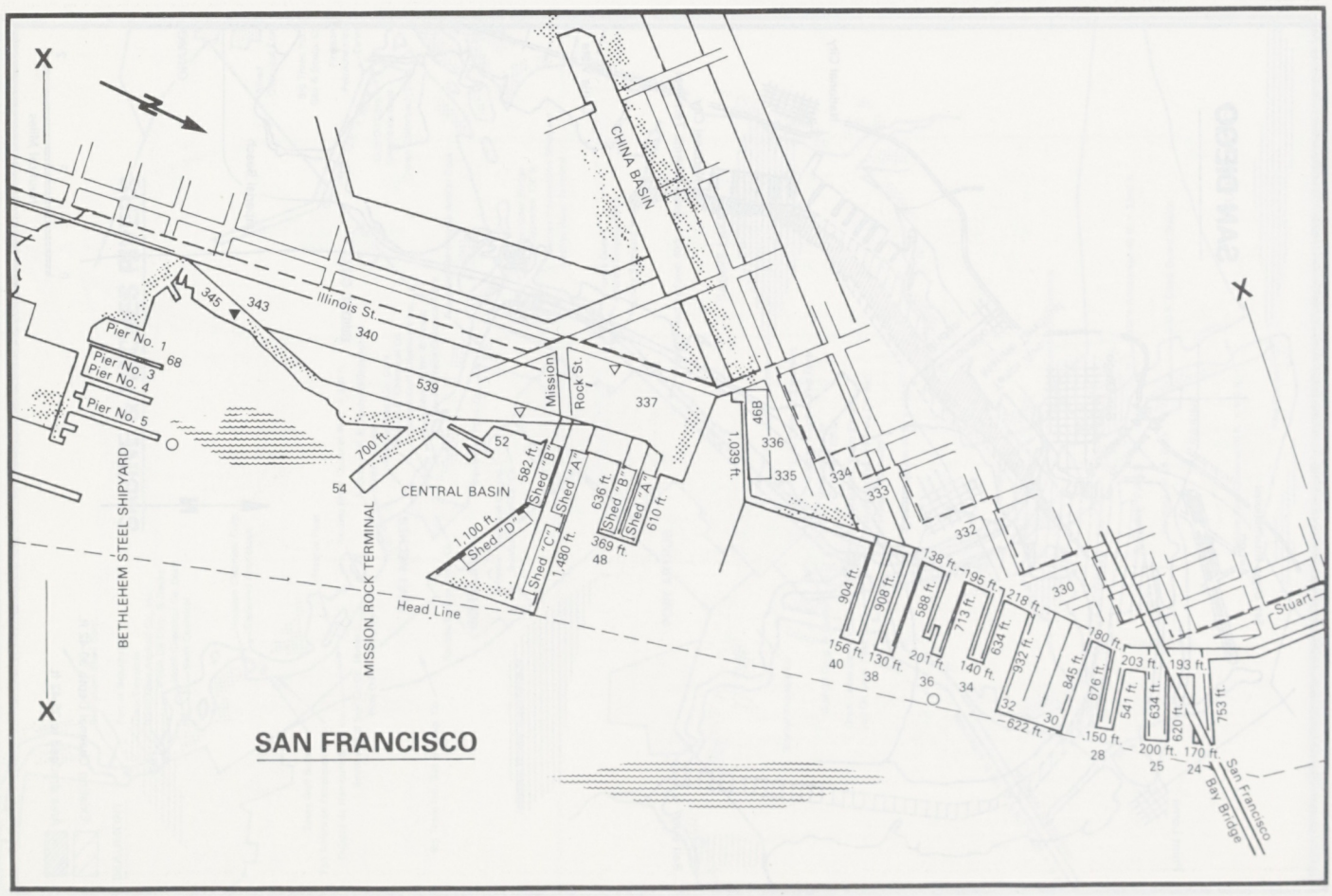

SABINE & NECHES RIVERS
BEAUMONT
Bethlehem Steel Corp.
Port of Beaumont
Grain Elevators
Gulf States Asphalt Co., Inc.
Mobil Oil Corp. & Docks
Mobil Chemical Co. Dock
Swift Chemical
Houston Chemical Corp.
Stanolind Anchorage
ORANGE
Allied Chemical Corp.
Big Three Ind. Gas & Equip. Co.
Firestone Petrochemical Center
Gulf Oil Corp. Chemicals Dept.
Crown Zellerbach Corp.
Cow Bayou 13 ft. × 100 ft.
Texas Gulf Sulphur
Pan American Petroleum Corp.
Dupont de Nemours & Co. Inc.
Smith's Bluff Sun Oil Co. Docks
Pure Oil Co. & Docks
Reserve Fleet
Neches River Channel 40 ft. × 350 ft.
BRIDGE CITY
Erickson Oil & Docks (Independent)
Costal Marine
Neches Shell Co. Dock
Texas-U.S. Chemical Co.
Goodrich-Gulf Chemicals Inc.
Texaco, Inc. & Docks
Jefferson Chemical Dock
PORT NECHES
Big Three Ind. Gas & Equip. Co.
Neches Butane Prod. Co.
NEDERLAND
Jefferson Chemical Co. Inc.
Sonford Chemical Co.
Petro Gas Prod. Co.
American Petrofina & Amdel Dock
Jefferson County Airport
Rainbow Bridge Clearance 178 ft.
Neches Intersection Shipyard
Neches River Terminal
Topco Dock
Atlantic Shipper Dock
Burton Shipyard Inc.
PORT ARTHUR
Sabine-Neches Canal 40 ft. × 400 ft.
SABINE LAKE
Port of Port Arthur
U.S. Corps of Engineers
Gulfport Shipbuilding Corp.
Gulfgate Bridge Clearance 138 ft.
Sinclair-Koppers Co.
Gulf Oil Corp. & Docks
Great Lakes Carbon Corp.
Gulf Oil Corp. Coke Dock
Cargill Inc. Grain Elevator
Hydrocarbon Products Co. Inc.
Texaco, Inc. Docks
Port Arthur Canal 40 ft. × 500 ft.
12 ft. × 125 ft. (16 ft. × 150 ft. authorized)
Intracoastal Waterway
Causeway
Chevron Oil Terminal
Sabine Pass Terminal (LPG)
SABINE PASS
Sabine Anchorage 40 ft. × 3,000 ft.
Scurlock Oil Co. Dock
U.S. Coast Guard Station
SABINE
Sabine Pass Channel 40 ft. × 500 ft.
GULF OF MEXICO
Pilot Station

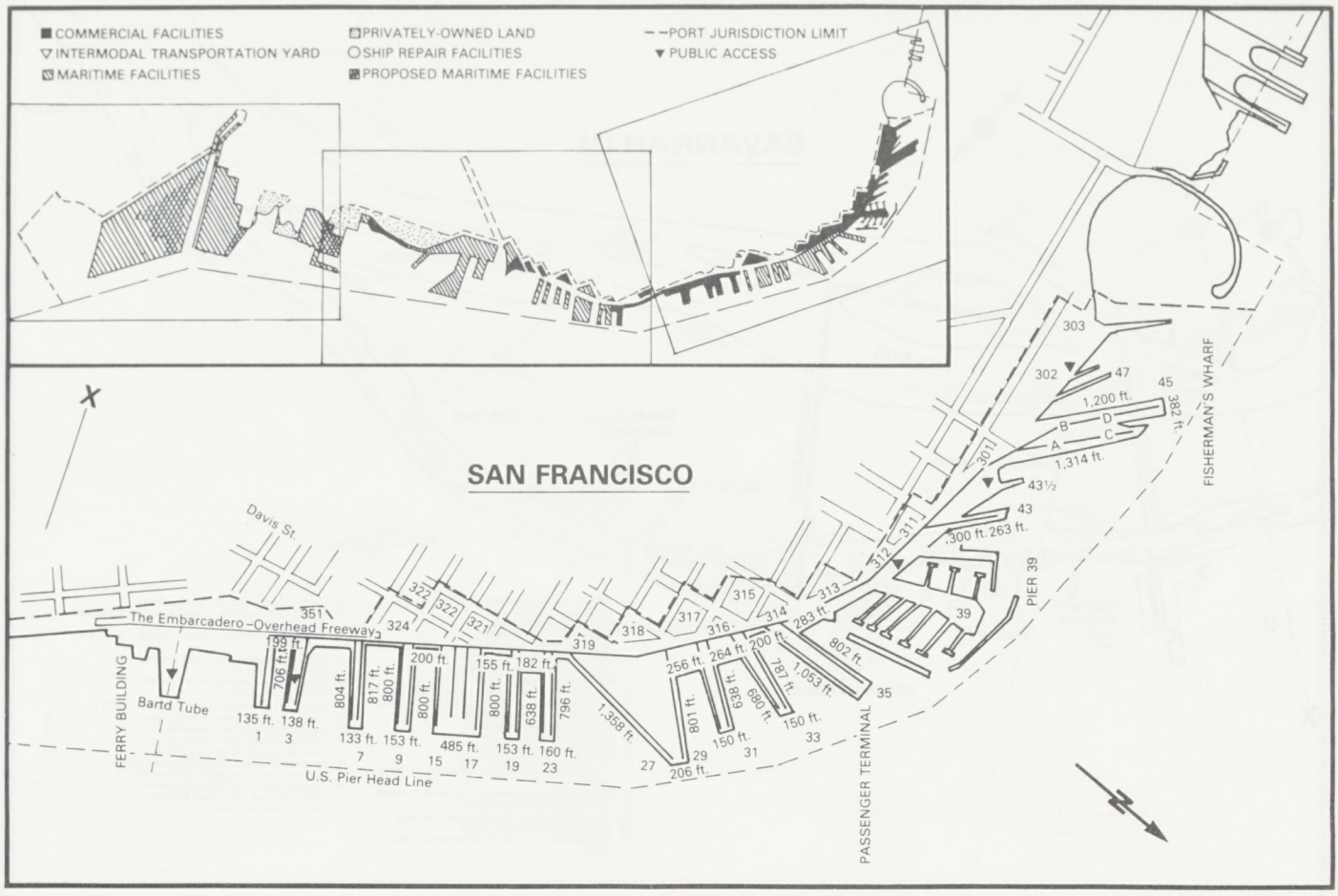

ROCHESTER
1000 500 0 1000
SCALE OF FEET
Upstream Federal Limit of Project
Genesee Docks
23ft Depth at L.W.D.
Cow Bayou 13 ft. × 100 ft.
N.Y.C.R.R. Freight Terminal
Vaughns Marina
ROCHESTER
TURNING BASIN 21ft
950'
Rattlesnake Point
Town of Irondequoit
Rochester Yacht Club
Yacht Basin
Turning Basin Depth 23ft
Project Depth 21ft
Project Depth 23ft
Project Depth 24ft
U.S. East Pier
East Pier Lt
U.S. West Pier
Rochester Hbr Lt
Ontario Beach Park
LAKE ONTARIO
Windsor Beach
N
Lake Erie
Buffalo
Rochester
Lake Ontario
New York
Ogdensburg
20 0
100 mls.


SACRAMENTO
Gate Service Bldg.
Harbor Blvd.
Truck Dumper
Gate House
Paved Storage
Bulk Storage Warehouse
Industrial Boulevard
Industrial Park
Lake Washington
Future Expansion
Bulk Materials Facility
Rotary Rail Car Dumper
Belt R.R.
Conveyor
Bagger
Paved Storage
Future Bulk Added Warehouse
Container Distribution Complex
Proposed Container Yard
Transit Shed
Bulk Warehouse
Future Warehouse
Park Road
Ship Loader
Gantry Cranes
Grain Elevator
Scale
Conveyor
Conveyor
Rice Elevators
Gate House
Parking
Office
Barge Slip
Grain Pier
Scale
Future Storage Tanks
30 ft. MLLW
Transit Shed
Conveyor
Barge Slip
Port R.R. Yard
Future Container Barge Lash Facility
Bulk Rice Pier
Barge Canal
Deep Water Ship Channel to Suisun Bay
8
7
6
5
2
1


SAN DIEGO
National City
National City Marine Terminal
Chula Vista
Imperial Beach
Nautical Miles
0
1
2
Tenth Ave Marine Terminal
Coronado Bridge
San Diego
B Street Pier
Broadway Pier
Interstate
San Diego International Airport
Coronado
N
Point Loma
Bell Buoy
Existing Channel Depth 30-42 ft.
Area dredged to 35-42 ft.


SAN FRANCISCO
Grain Elevators
344
Warehouse
352
Gate House
India Basin
P.G. & E. Co.
Cargo Way
Maint. & Repair
94 East
96
U.S. Bulkhead
PIER 94-96 TERMINAL
GRAIN TERMINAL
ARMY STREET TERMINAL
AUTOMOBILE TERMINAL
U.S. Pier Line
Pier No. 8
Warm Water Cove
U.S. Bulkhead
Islais Creek
Grain Elevator
Shed "A"
Shed "B"
Shed "C"
Shed "D"
2,577 ft.
1,296 ft.
1,138 ft.
200 ft.
Gate House
Control Tower
Container Office
Office
Army
Gate
Marin
Illinois St.
Twenty Sixth
Twenty Fifth
Twenty Fourth
Twenty Third
Georgia
Louisiana
Maryland St.
Delaware
Massachusetts
P.G. & E. Co.
354
88
84
90
86
92
80
X
X

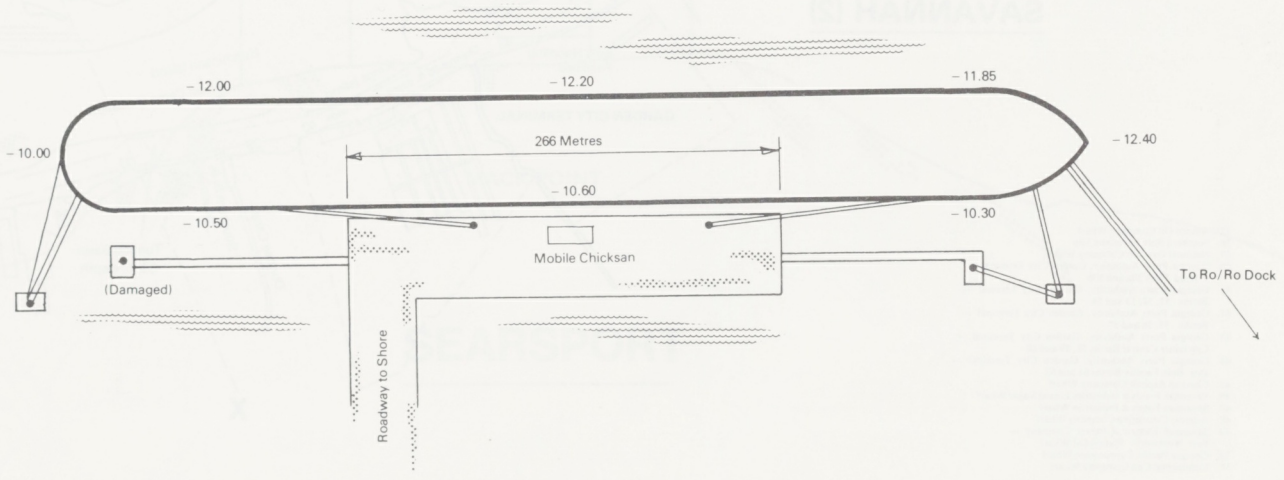

SAN FRANCISCO
CHINA BASIN
Illinois St.
345
343
340
539
337
Pier No. 1
Pier No. 3
Pier No. 4
Pier No. 5
68
54
52
Mission Rock St.
BETHLEHEM STEEL SHIPYARD
MISSION ROCK TERMINAL
CENTRAL BASIN
Head Line
700 ft.
582 ft.
1,100 ft.
1,480 ft.
636 ft.
369 ft.
610 ft.
48
Shed "A"
Shed "B"
Shed "C"
Shed "D"
1,039 ft.
46B
336
335
334
333
332
330
Stuart
904 ft.
908 ft.
588 ft.
713 ft.
634 ft.
932 ft.
845 ft.
676 ft.
541 ft.
634 ft.
620 ft.
753 ft.
138 ft.
195 ft.
218 ft.
180 ft.
203 ft.
193 ft.
156 ft.
130 ft.
201 ft.
140 ft.
622 ft.
150 ft.
200 ft.
170 ft.
40
38
36
34
32
30
28
25
24
San Francisco Bay Bridge
X
X



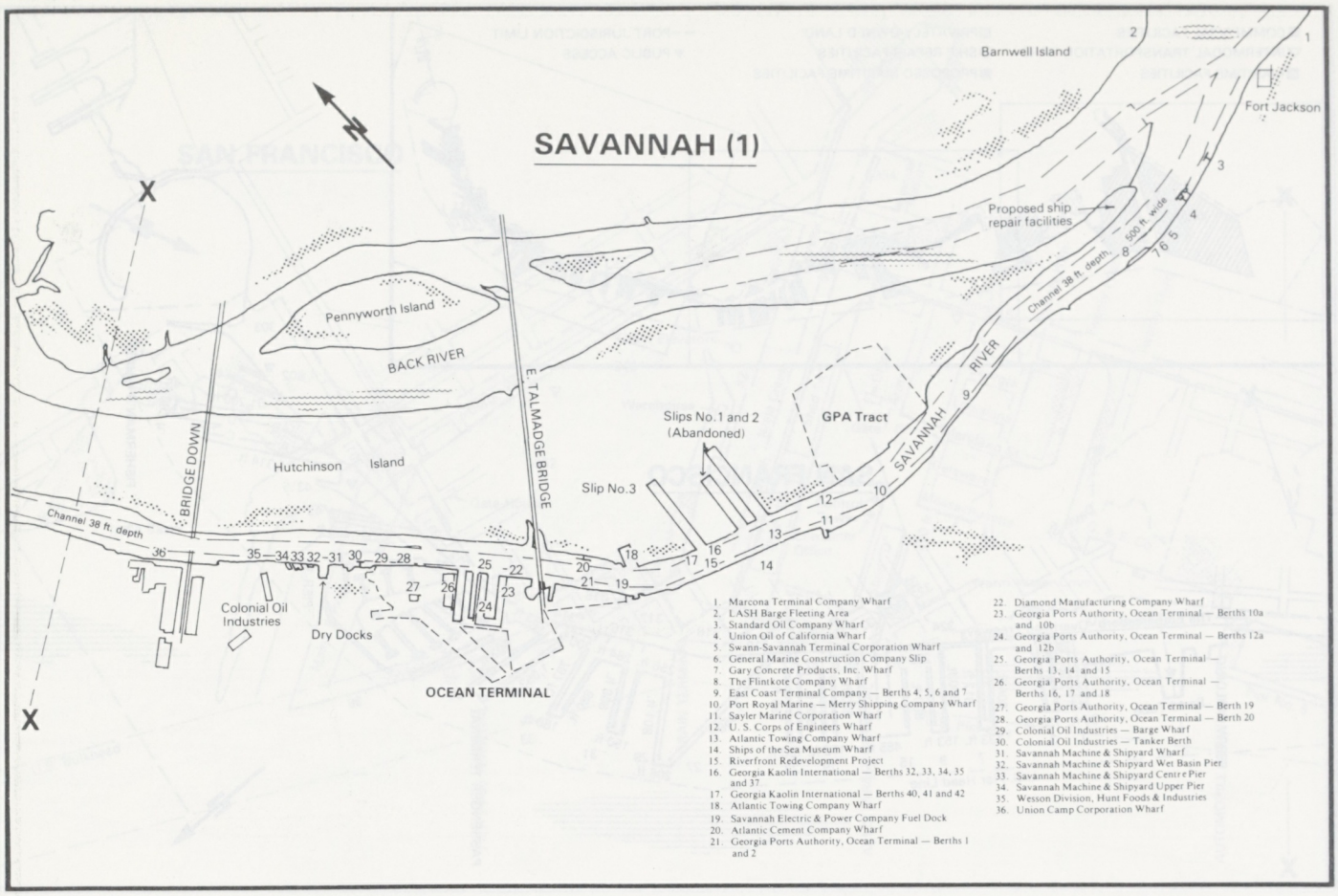
SAVANNAH

DOCK 61 – AMMONIA OXY

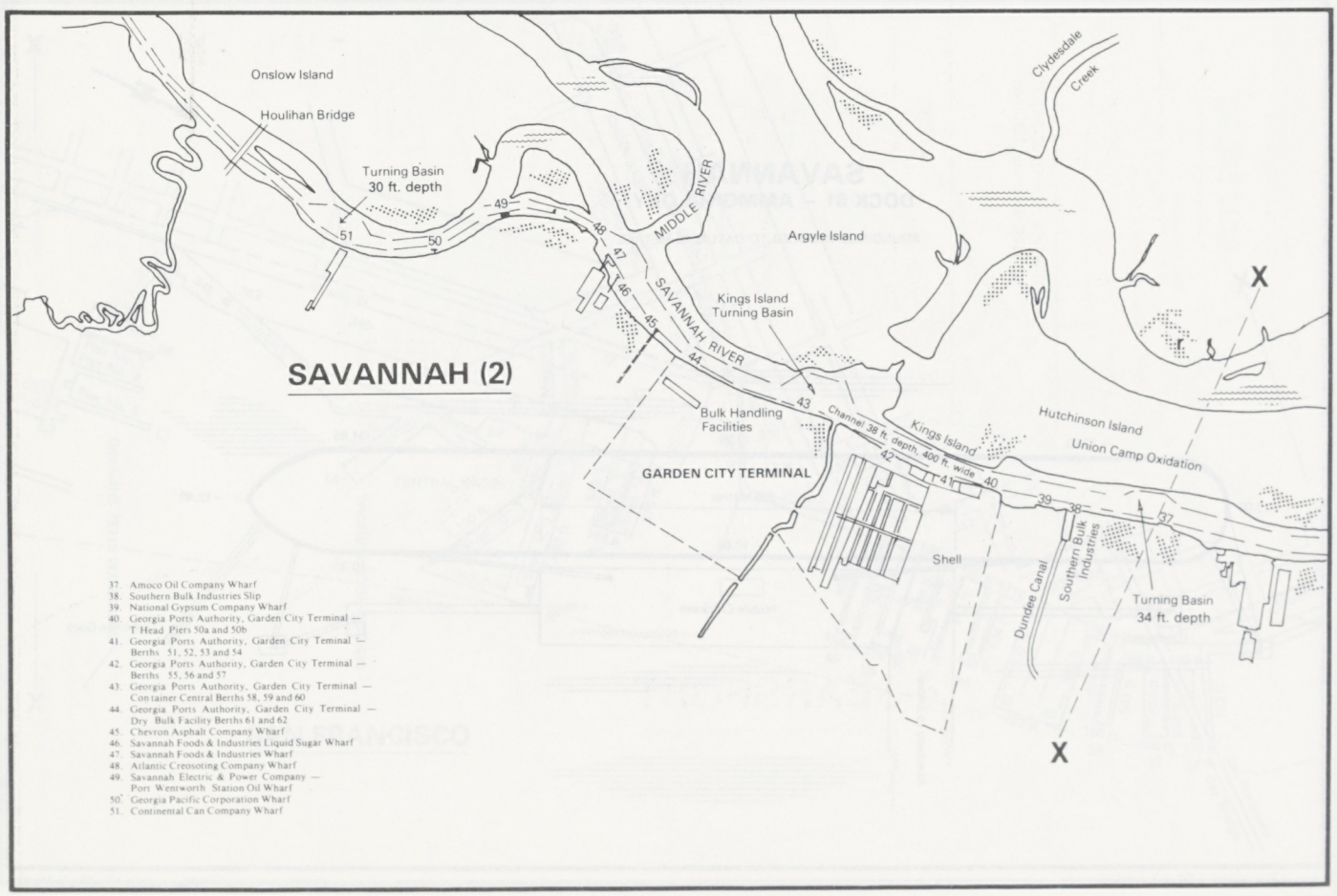
SOUNDINGS REDUCED TO DATUM IN METRES



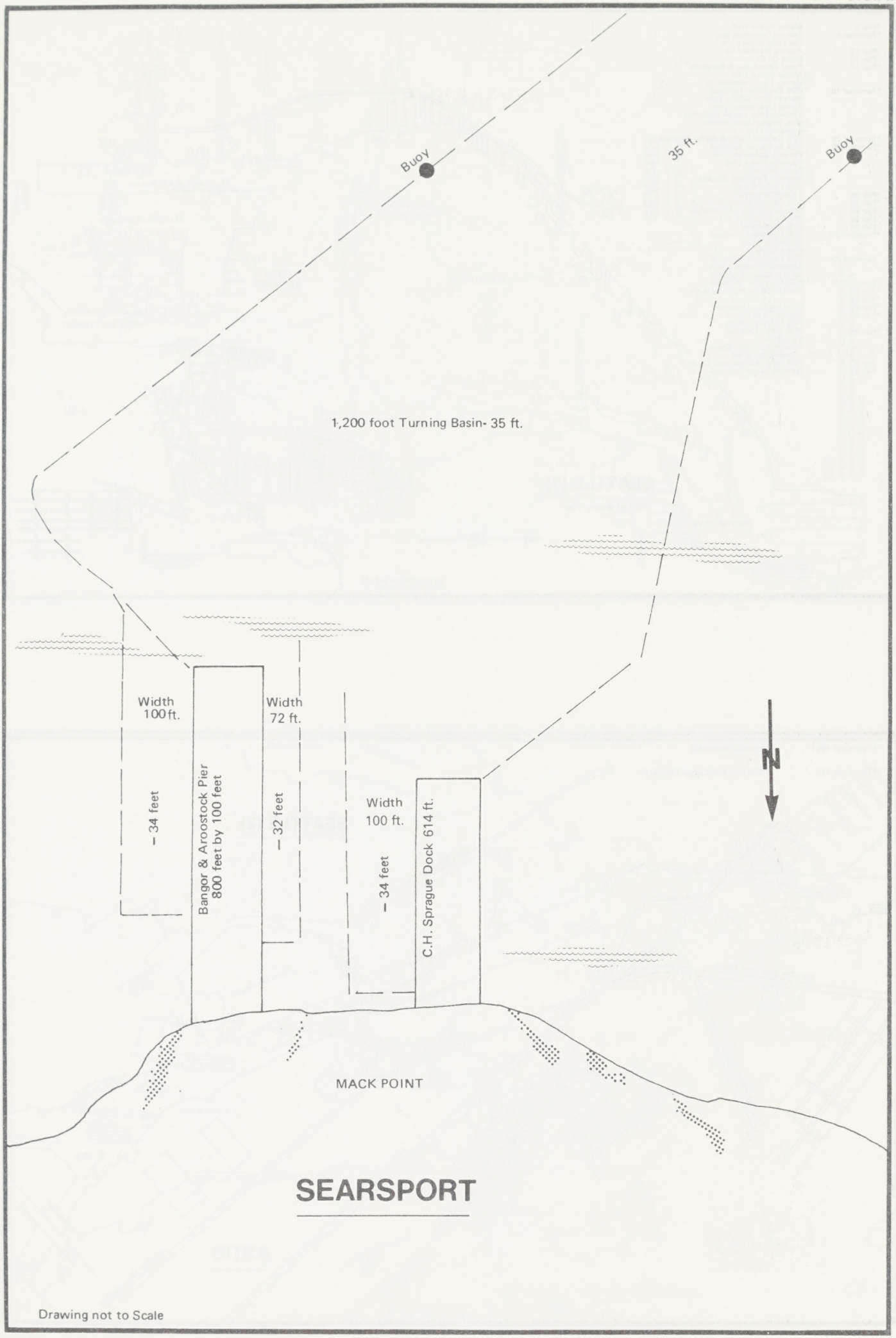
"Plan supplied by Ship's Master"



1. Marcona Terminal Company Wharf
2. LASH Barge Fleeting Area
3. Standard Oil Company Wharf
4. Union Oil of California Wharf
5. Swann-Savannah Terminal Corporation Wharf
6. General Marine Construction Company Slip
7. Gary Concrete Products, Inc. Wharf
8. The Flintkote Company Wharf
9. East Coast Terminal Company — Berths 4, 5, 6 and 7
10. Port Royal Marine — Merry Shipping Company Wharf
11. Sayler Marine Corporation Wharf
12. U. S. Corps of Engineers Wharf
13. Atlantic Towing Company Wharf
14. Ships of the Sea Museum Wharf
15. Riverfront Redevelopment Project
16. Georgia Kaolin International — Berths 32, 33, 34, 35 and 37
17. Georgia Kaolin International — Berths 40, 41 and 42
18. Atlantic Towing Company Wharf
19. Savannah Electric & Power Company Fuel Dock
20. Atlantic Cement Company Wharf
21. Georgia Ports Authority, Ocean Terminal — Berths 1 and 2
22. Diamond Manufacturing Company Wharf
23. Georgia Ports Authority, Ocean Terminal — Berths 10a and 10b
24. Georgia Ports Authority, Ocean Terminal — Berths 12a and 12b
25. Georgia Ports Authority, Ocean Terminal — Berths 13, 14 and 15
26. Georgia Ports Authority, Ocean Terminal — Berths 16, 17 and 18
27. Georgia Ports Authority, Ocean Terminal — Berth 19
28. Georgia Ports Authority, Ocean Terminal — Berth 20
29. Colonial Oil Industries — Barge Wharf
30. Colonial Oil Industries — Tanker Berth
31. Savannah Machine & Shipyard Wharf
32. Savannah Machine & Shipyard Wet Basin Pier
33. Savannah Machine & Shipyard Centre Pier
34. Savannah Machine & Shipyard Upper Pier
35. Wesson Division, Hunt Foods & Industries
36. Union Camp Corporation Wharf

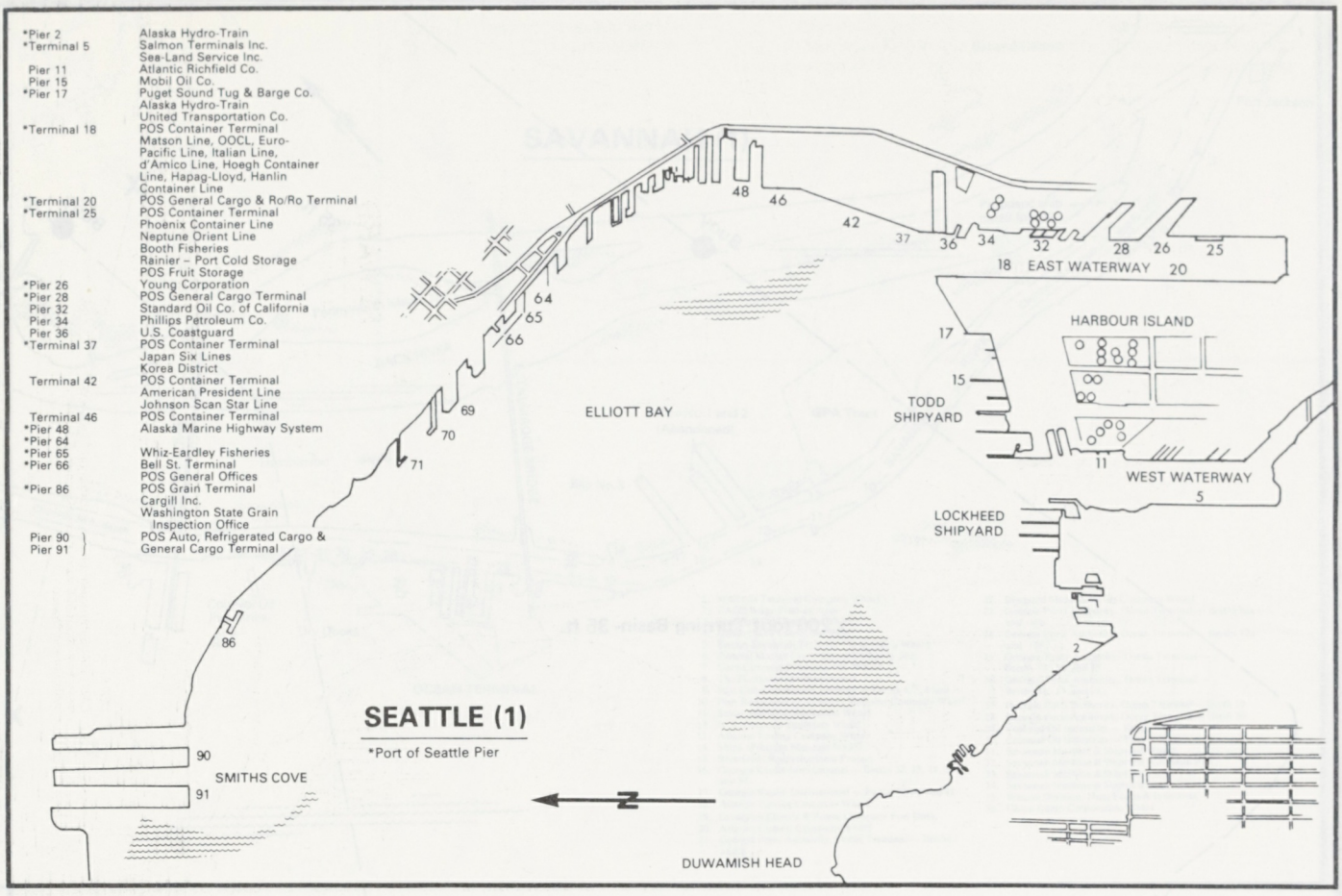


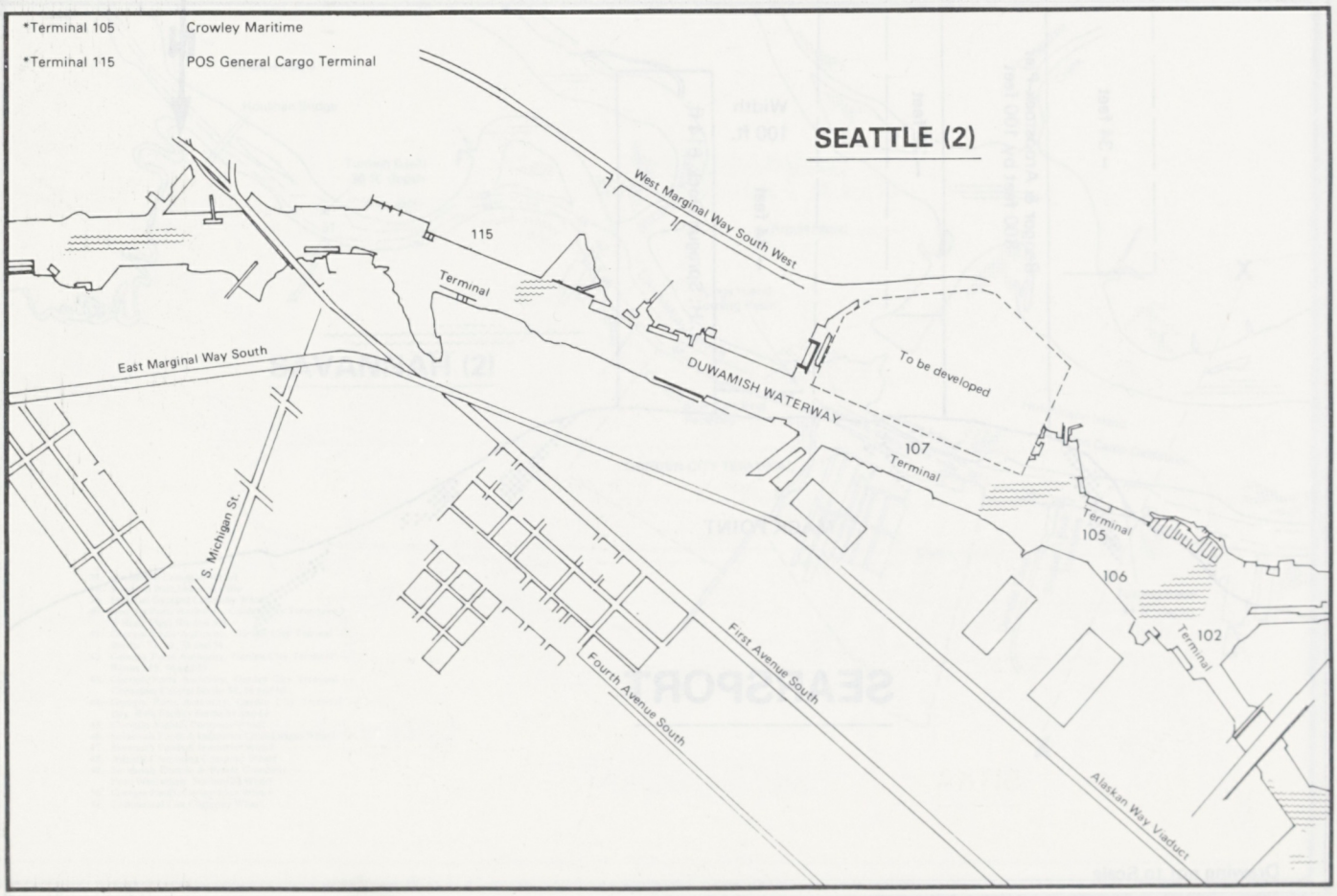
37. Amoco Oil Company Wharf
38. Southern Bulk Industries Slip
39. National Gypsum Company Wharf
40. Georgia Ports Authority, Garden City Terminal — T Head Piers 50a and 50b
41. Georgia Ports Authority, Garden City Teminal — Berths 51, 52, 53 and 54
42. Georgia Ports Authority, Garden City Terminal — Berths 55, 56 and 57
43. Georgia Ports Authority, Garden City Terminal — Container Central Berths 58, 59 and 60
44. Georgia Ports Authority, Garden City Terminal — Dry Bulk Facility Berths 61 and 62
45. Chevron Asphalt Company Wharf
46. Savannah Foods & Industries Liquid Sugar Wharf
47. Savannah Foods & Industries Wharf
48. Atlantic Creosoting Company Wharf
49. Savannah Electric & Power Company — Port Wentworth Station Oil Wharf
50. Georgia Pacific Corporation Wharf
51. Continental Can Company Wharf

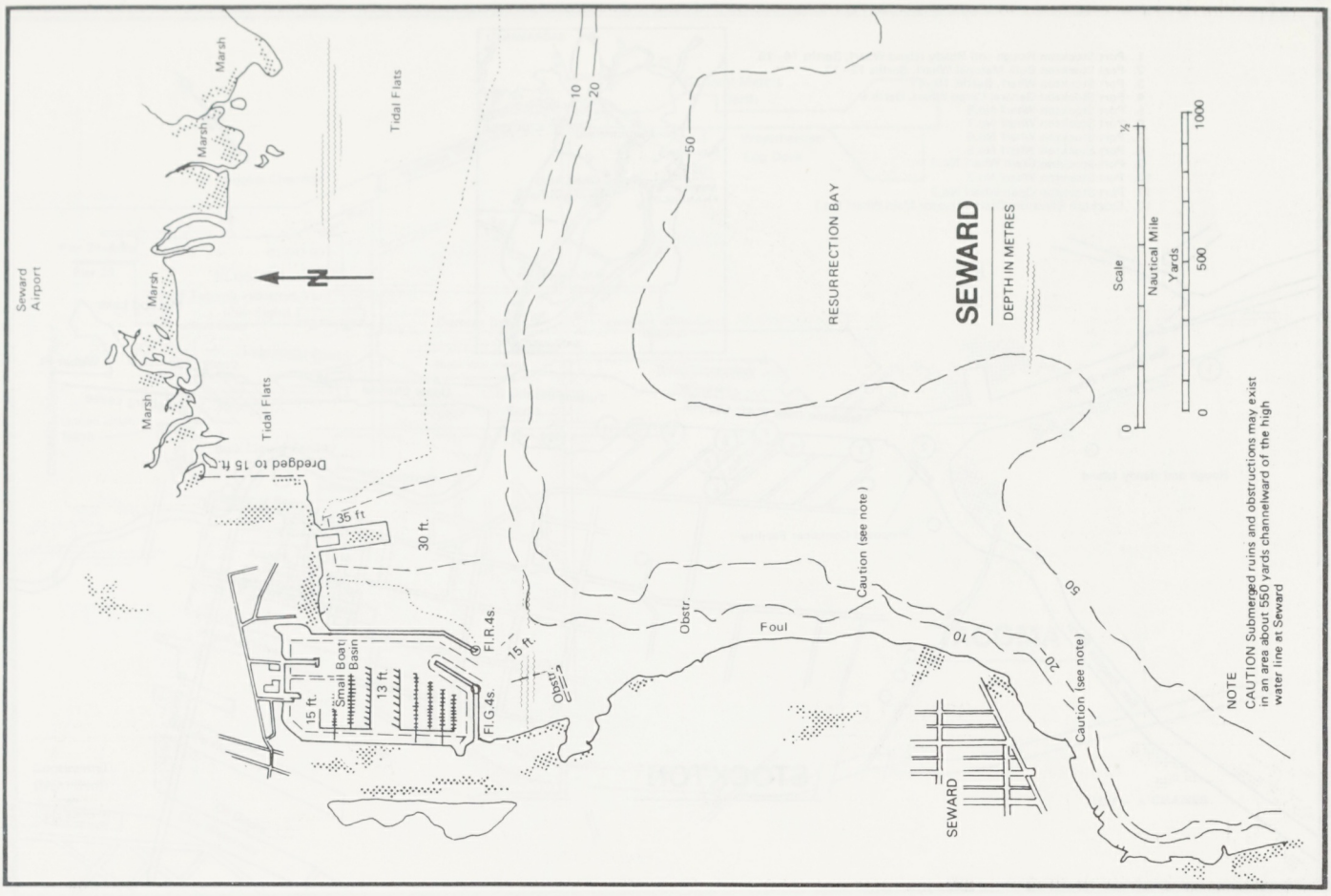


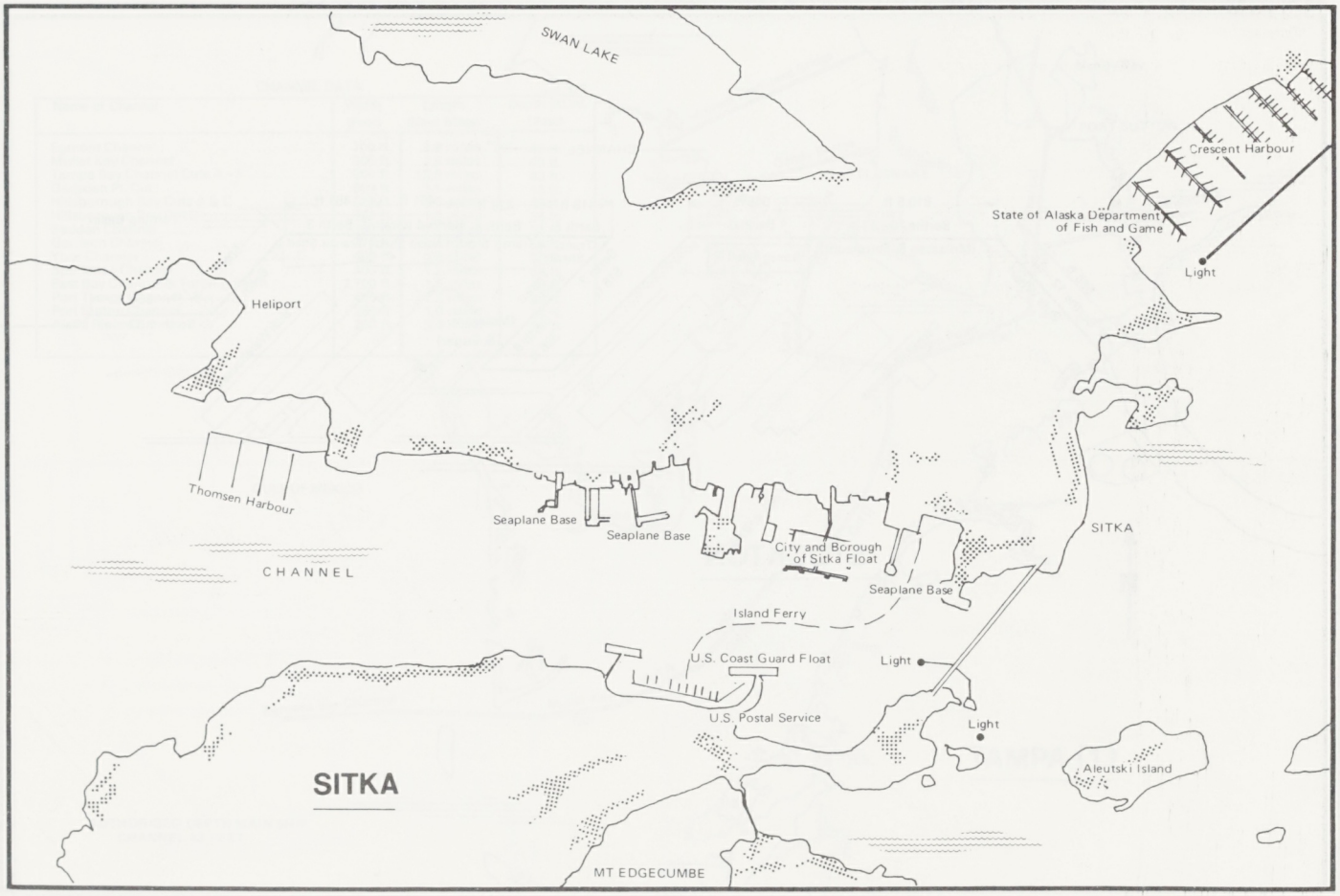
SEARSPORT

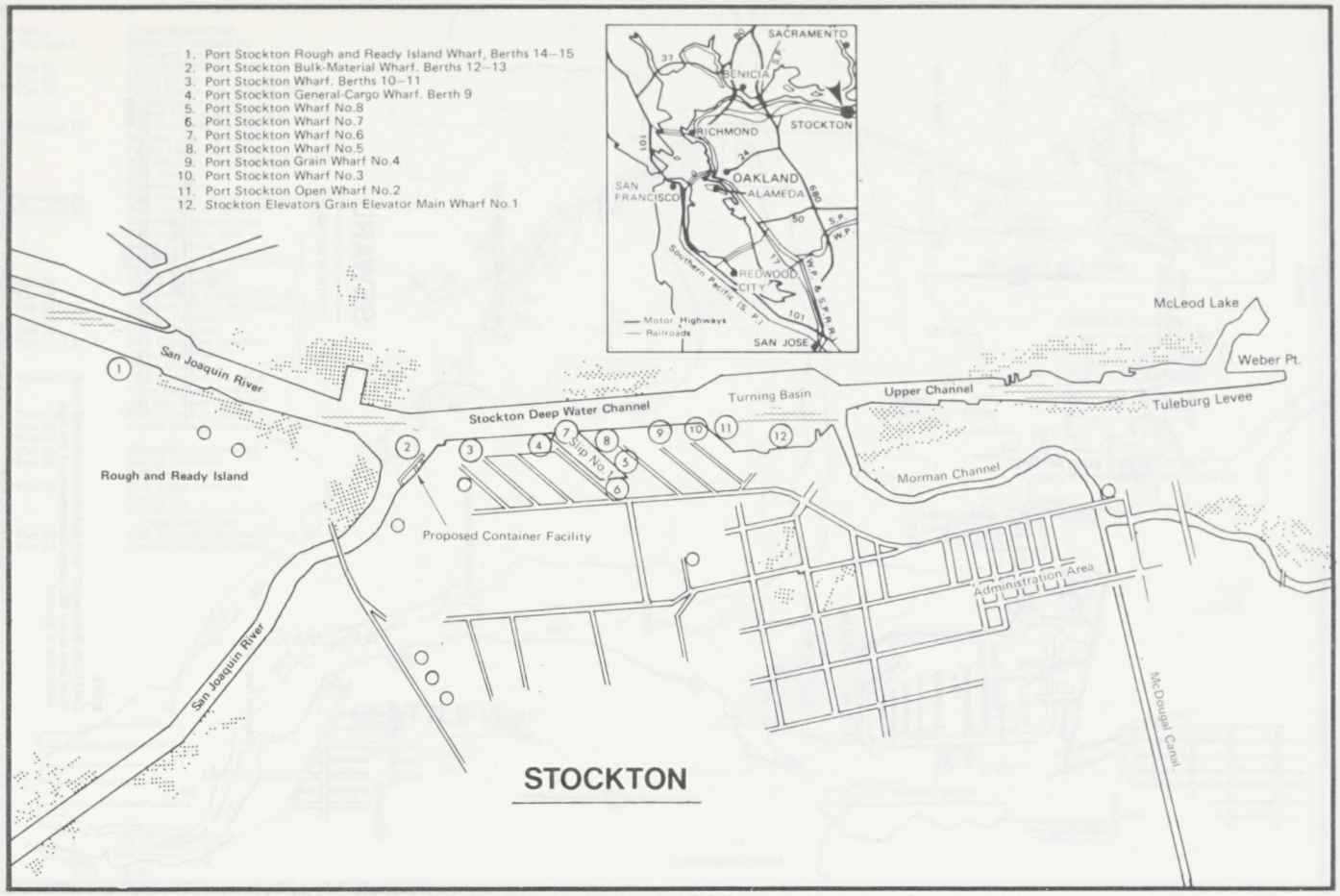
Drawing not to Scale

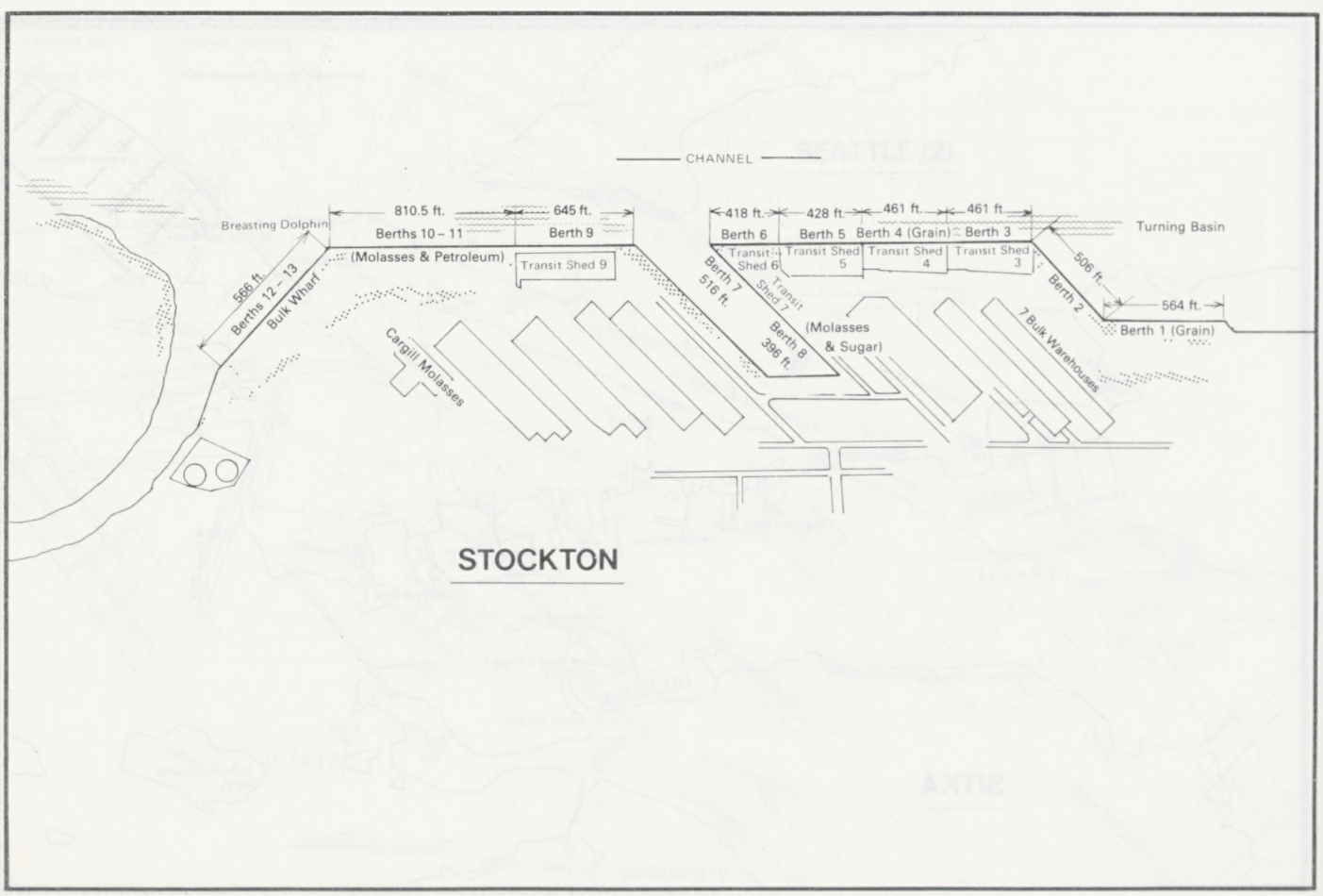

*Pier 2 Alaska Hydro-Train
*Terminal 5 Salmon Terminals Inc.
Sea-Land Service Inc.
Pier 11 Atlantic Richfield Co.
Pier 15 Mobil Oil Co.
*Pier 17 Puget Sound Tug & Barge Co.
Alaska Hydro-Train
United Transportation Co.
*Terminal 18 POS Container Terminal
Matson Line, OOCL, Euro-Pacific Line, Italian Line, d'Amico Line, Hoegh Container Line, Hapag-Lloyd, Hanlin Container Line
*Terminal 20 POS General Cargo & Ro/Ro Terminal
*Terminal 25 POS Container Terminal
Phoenix Container Line
Neptune Orient Line
Booth Fisheries
Rainier – Port Cold Storage
POS Fruit Storage
*Pier 26 Young Corporation
*Pier 28 POS General Cargo Terminal
Pier 32 Standard Oil Co. of California
Pier 34 Phillips Petroleum Co.
Pier 36 U.S. Coastguard
*Terminal 37 POS Container Terminal
Japan Six Lines
Korea District
Terminal 42 POS Container Terminal
American President Line
Johnson Scan Star Line
Terminal 46 POS Container Terminal
*Pier 48 Alaska Marine Highway System
*Pier 64
*Pier 65 Whiz-Eardley Fisheries
*Pier 66 Bell St. Terminal
POS General Offices
*Pier 86 POS Grain Terminal
Cargill Inc.
Washington State Grain Inspection Office
Pier 90 } POS Auto, Refrigerated Cargo &
Pier 91 } General Cargo Terminal
SEATTLE (1)
*Port of Seattle Pier
ELLIOTT BAY
HARBOUR ISLAND
TODD SHIPYARD
WEST WATERWAY
LOCKHEED SHIPYARD
SMITHS COVE
DUWAMISH HEAD
N

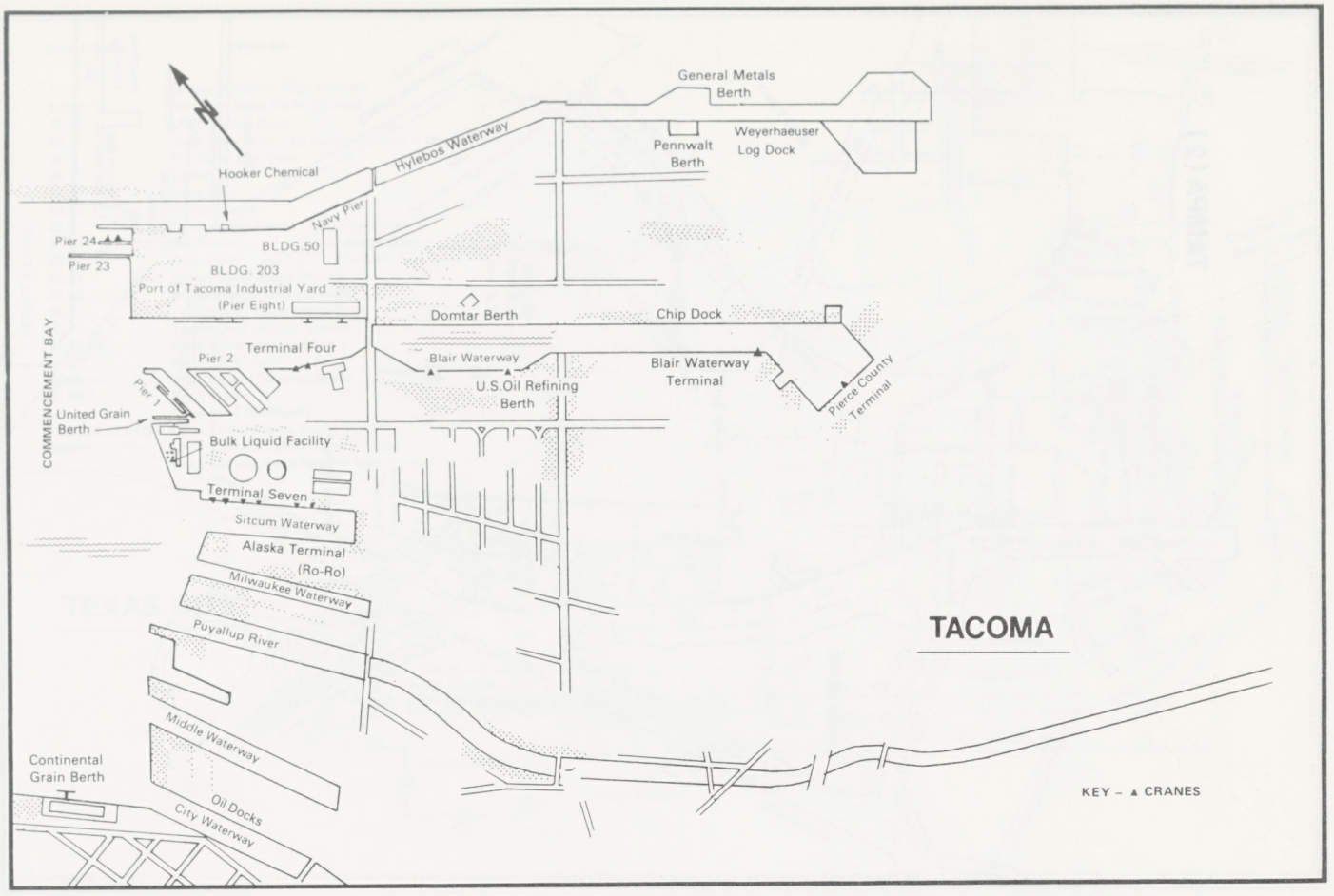

*Terminal 105 Crowley Maritime
*Terminal 115 POS General Cargo Terminal
SEATTLE (2)
West Marginal Way South West
115 Terminal
East Marginal Way South
DUWAMISH WATERWAY
To be developed
107 Terminal
105 Terminal
106
102 Terminal
S. Michigan St.
First Avenue South
Fourth Avenue South
Alaskan Way Viaduct


SEWARD
DEPTH IN METRES
RESURRECTION BAY
Scale
Nautical Mile
Yards
Seward Airport
Marsh
Tidal Flats
Dredged to 15 ft
35 ft
30 ft.
Small Boat Basin
13 ft.
15 ft.
Fl.R.4s.
Fl.G.4s.
Obstr.
Foul
Caution (see note)
SEWARD
NOTE
CAUTION Submerged ruins and obstructions may exist in an area about 550 yards channelward of the high water line at Seward


SWAN LAKE
Crescent Harbour
State of Alaska Department of Fish and Game
Light
Heliport
Thomsen Harbour
CHANNEL
Seaplane Base
Seaplane Base
City and Borough of Sitka Float
Seaplane Base
SITKA
Island Ferry
U.S. Coast Guard Float
Light
U.S. Postal Service
Light
Aleutski Island
SITKA
MT EDGECUMBE

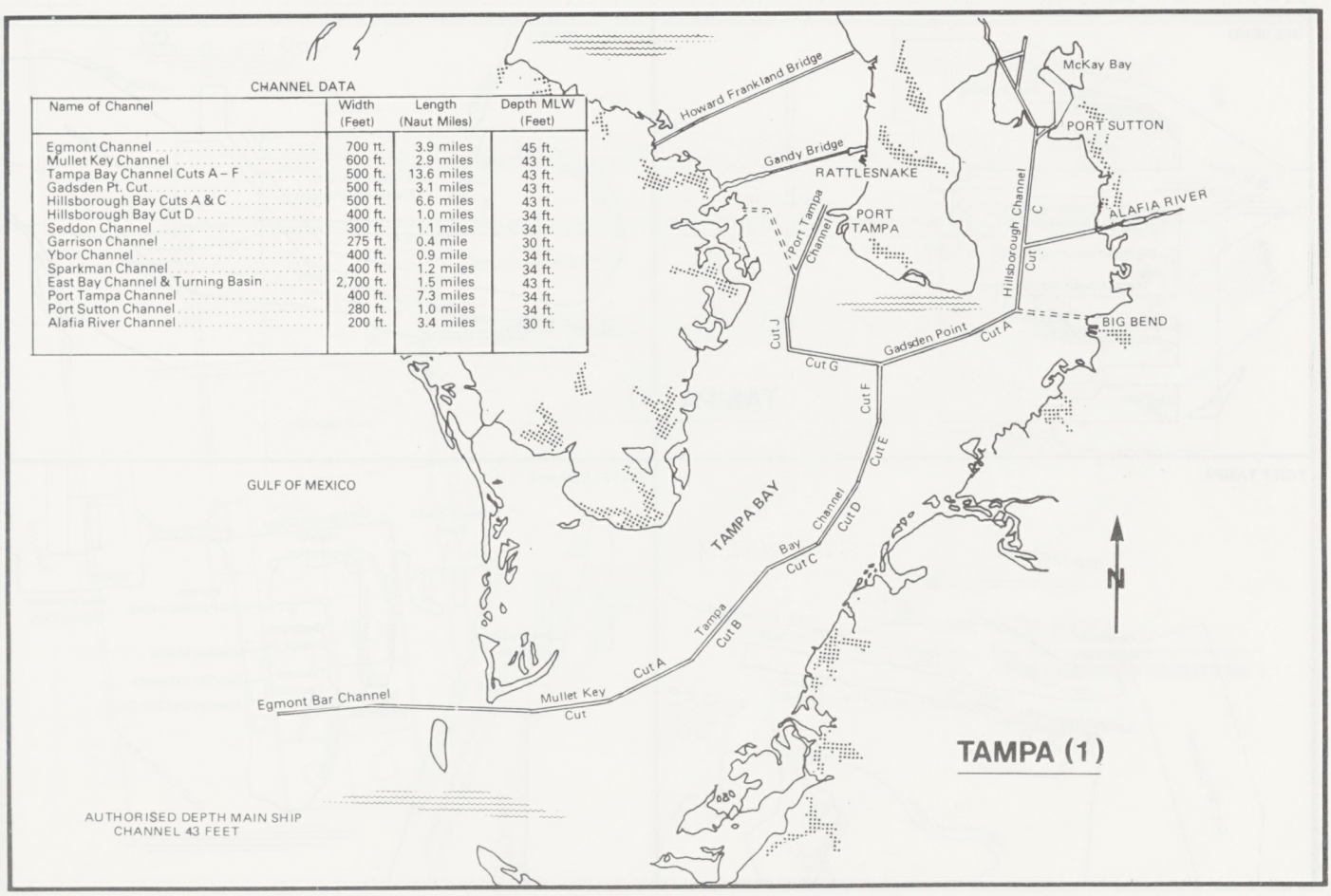

1. Port Stockton Rough and Ready Island Wharf, Berths 14–15
2. Port Stockton Bulk-Material Wharf, Berths 12–13
3. Port Stockton Wharf, Berths 10–11
4. Port Stockton General-Cargo Wharf, Berth 9
5. Port Stockton Wharf No.8
6. Port Stockton Wharf No.7
7. Port Stockton Wharf No.6
8. Port Stockton Wharf No.5
9. Port Stockton Grain Wharf No.4
10. Port Stockton Wharf No.3
11. Port Stockton Open Wharf No.2
12. Stockton Elevators Grain Elevator Main Wharf No.1
SACRAMENTO
BENICIA
RICHMOND
STOCKTON
OAKLAND
ALAMEDA
SAN FRANCISCO
REDWOOD CITY
SAN JOSE
Motor Highways
Railroads
San Joaquin River
Stockton Deep Water Channel
Turning Basin
Upper Channel
McLeod Lake
Weber Pt.
Tuleburg Levee
Rough and Ready Island
Slip No. 1
Morman Channel
Proposed Container Facility
Administration Area
San Joaquin River
McDougal Canal
STOCKTON

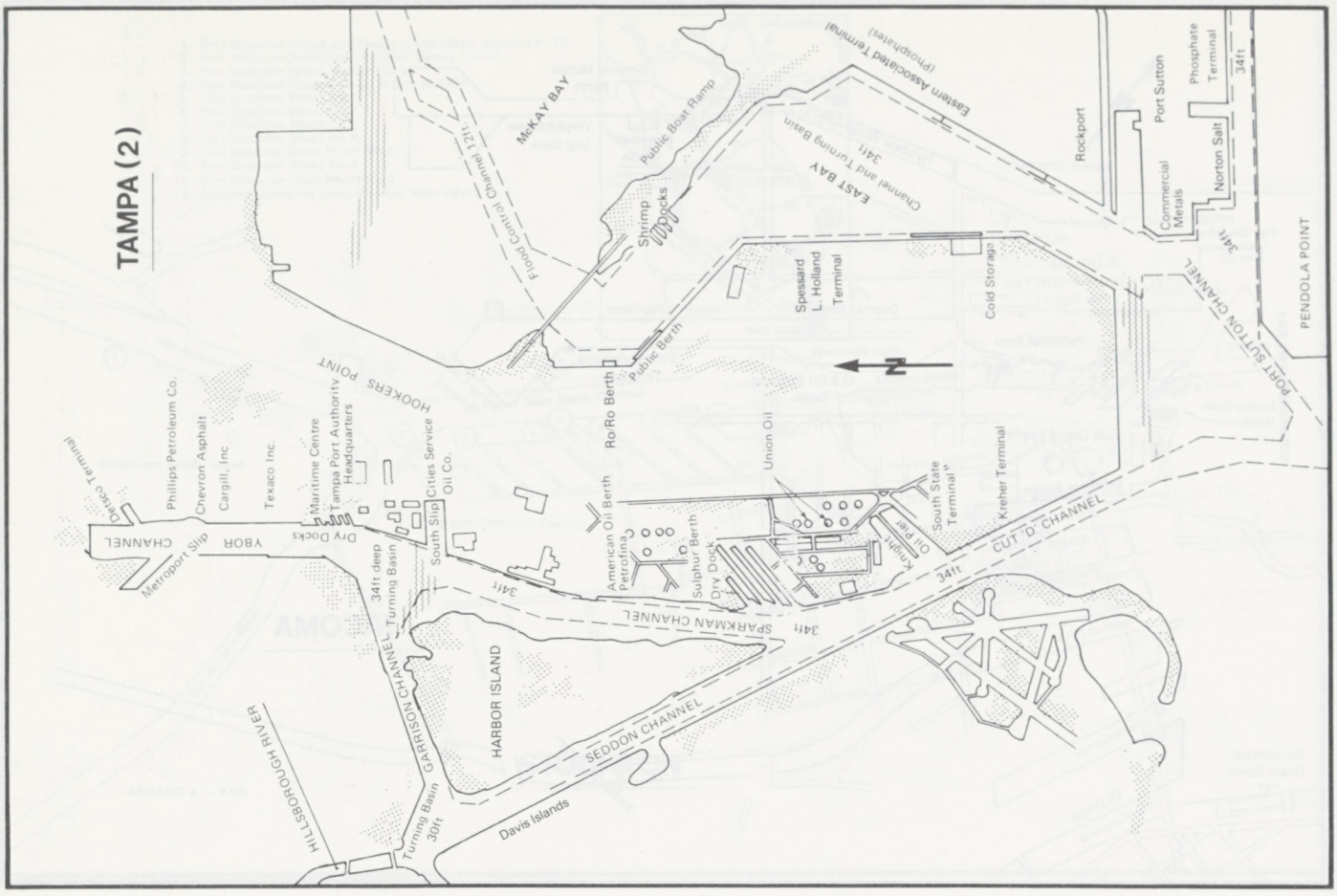

CHANNEL
Breasting Dolphin
810.5 ft.
645 ft.
Berths 10 – 11
Berth 9
(Molasses & Petroleum)
Transit Shed 9
566 ft.
Berths 12 – 13
Bulk Wharf
Cargill Molasses
418 ft.
428 ft.
461 ft.
461 ft.
Berth 6
Berth 5
Berth 4 (Grain)
Berth 3
Transit Shed 6
Transit Shed 5
Transit Shed 4
Transit Shed 3
Turning Basin
506 ft.
Berth 2
564 ft.
Berth 1 (Grain)
Berth 7
516 ft.
Transit Shed 7
Berth 8
396 ft.
(Molasses & Sugar)
7 Bulk Warehouses
STOCKTON



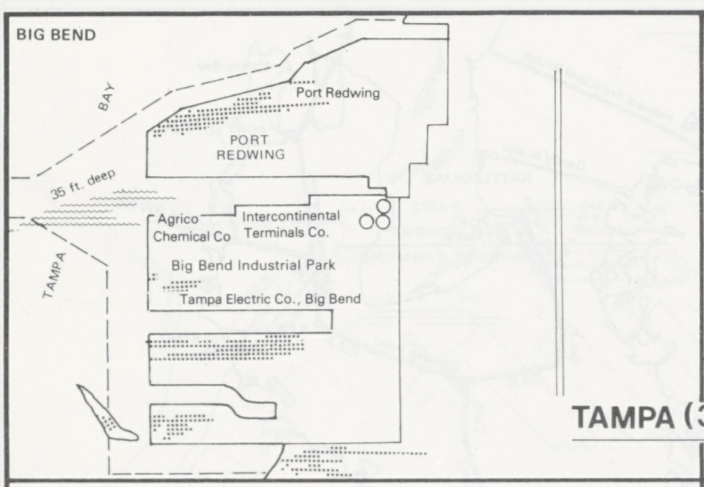
CHANNEL DATA

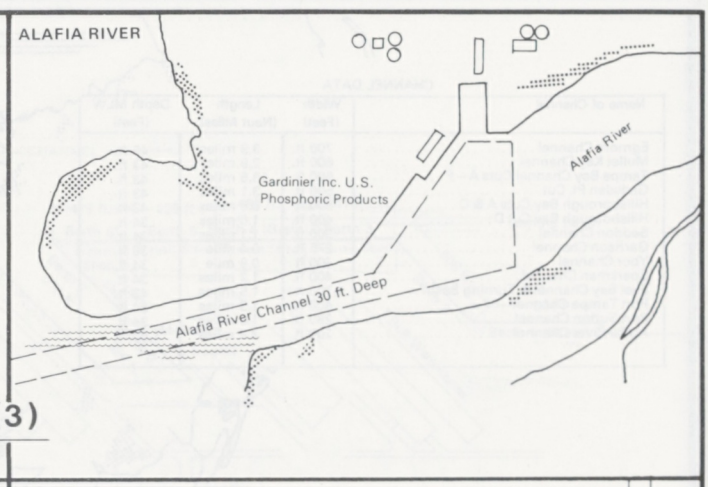
Name of Channel	Width (Feet)	Length (Naut Miles)	Depth MLW (Feet)
Egmont Channel	700 ft.	3.9 miles	45 ft.
Mullet Key Channel	600 ft.	2.9 miles	43 ft.
Tampa Bay Channel Cuts A – F	500 ft.	13.6 miles	43 ft.
Gadsden Pt. Cut	500 ft.	3.1 miles	43 ft.
Hillsborough Bay Cuts A & C	500 ft.	6.6 miles	43 ft.
Hillsborough Bay Cut D	400 ft.	1.0 miles	34 ft.
Seddon Channel	300 ft.	1.1 miles	34 ft.
Garrison Channel	275 ft.	0.4 mile	30 ft.
Ybor Channel	400 ft.	0.9 mile	34 ft.
Sparkman Channel	400 ft.	1.2 miles	34 ft.
East Bay Channel & Turning Basin	2,700 ft.	1.5 miles	43 ft.
Port Tampa Channel	400 ft.	7.3 miles	34 ft.
Port Sutton Channel	280 ft.	1.0 miles	34 ft.
Alafia River Channel	200 ft.	3.4 miles	30 ft.

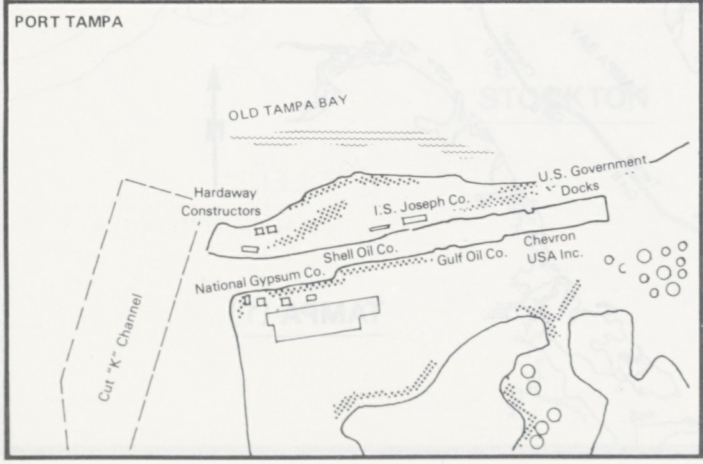


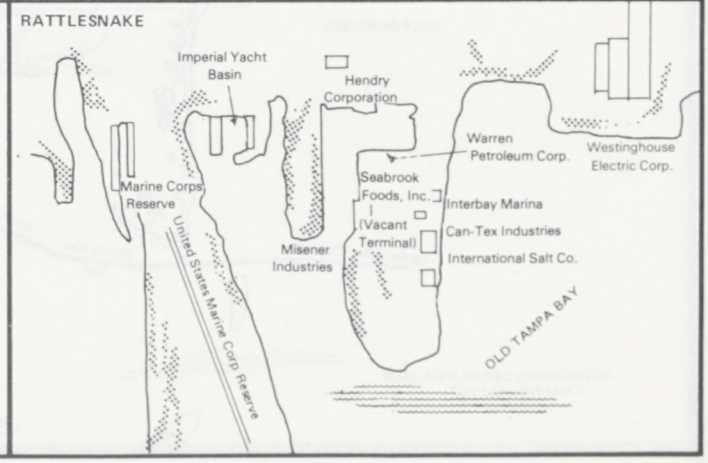

TAMPA (2)
McKAY BAY
Public Boat Ramp
Flood Control Channel 12ft
Eastern Associated Terminal (Phosphates)
EAST BAY
Channel and Turning Basin 34ft
Shrimp Docks
Rockport
Port Sutton
Phosphate Terminal
34ft
Commercial Metals
Norton Salt
PORT SUTTON CHANNEL
PENDOLA POINT
Spessard L. Holland Terminal
Cold Storage
Public Berth
Ro/Ro Berth
HOOKERS POINT
Phillips Petroleum Co.
Chevron Asphalt
Cargill, Inc
Texaco Inc.
Maritime Centre
Tampa Port Authority Headquarters
Cities Service Oil Co.
Union Oil
Kreher Terminal
South State Terminal
Oil Pier
American Oil Berth
Petrofina
Sulphur Berth
Dry Dock
Dry Docks
YBOR CHANNEL
Metroport Slip
Outboard Terminal
34ft deep Turning Basin
South Slip
34ft
CUT 'D' CHANNEL
SPARKMAN CHANNEL
HARBOR ISLAND
GARRISON CHANNEL
SEDDON CHANNEL
HILLSBOROUGH RIVER
Turning Basin 30ft
Davis Islands

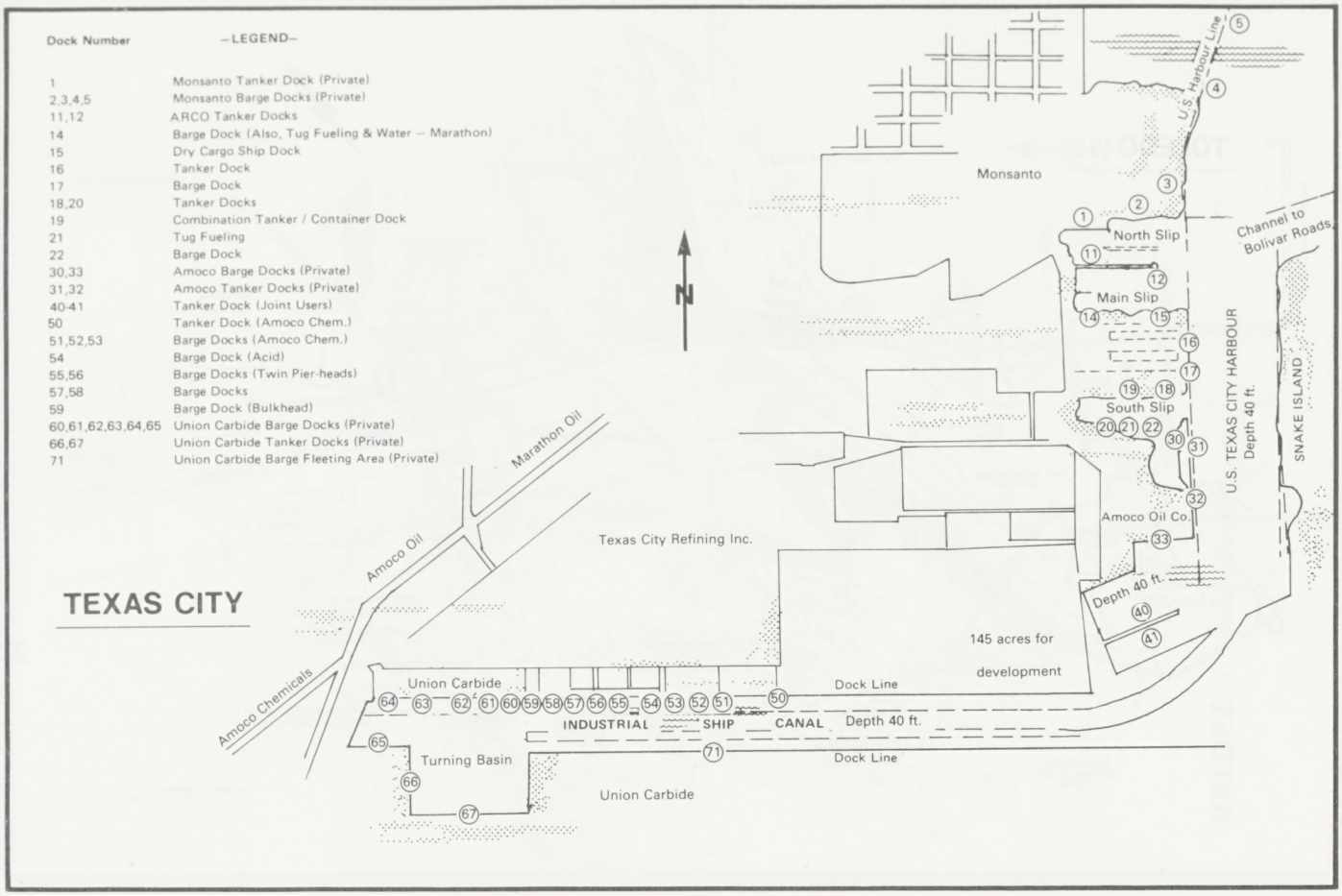
TAMPA (3)

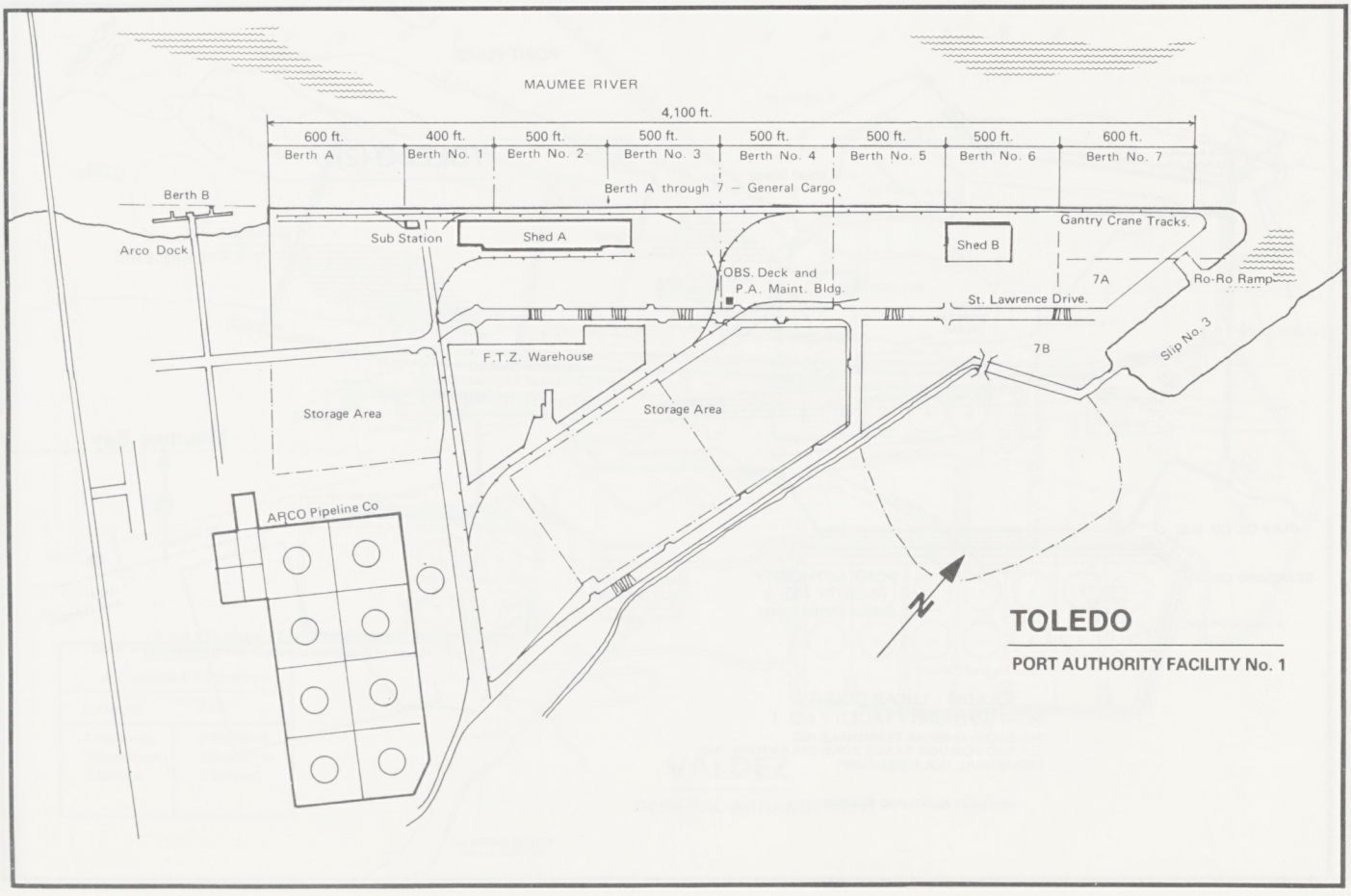

BIG BEND
BAY
Port Redwing
PORT REDWING
35 ft. deep
Agrico Chemical Co
Intercontinental Terminals Co.
Big Bend Industrial Park
Tampa Electric Co., Big Bend
TAMPA

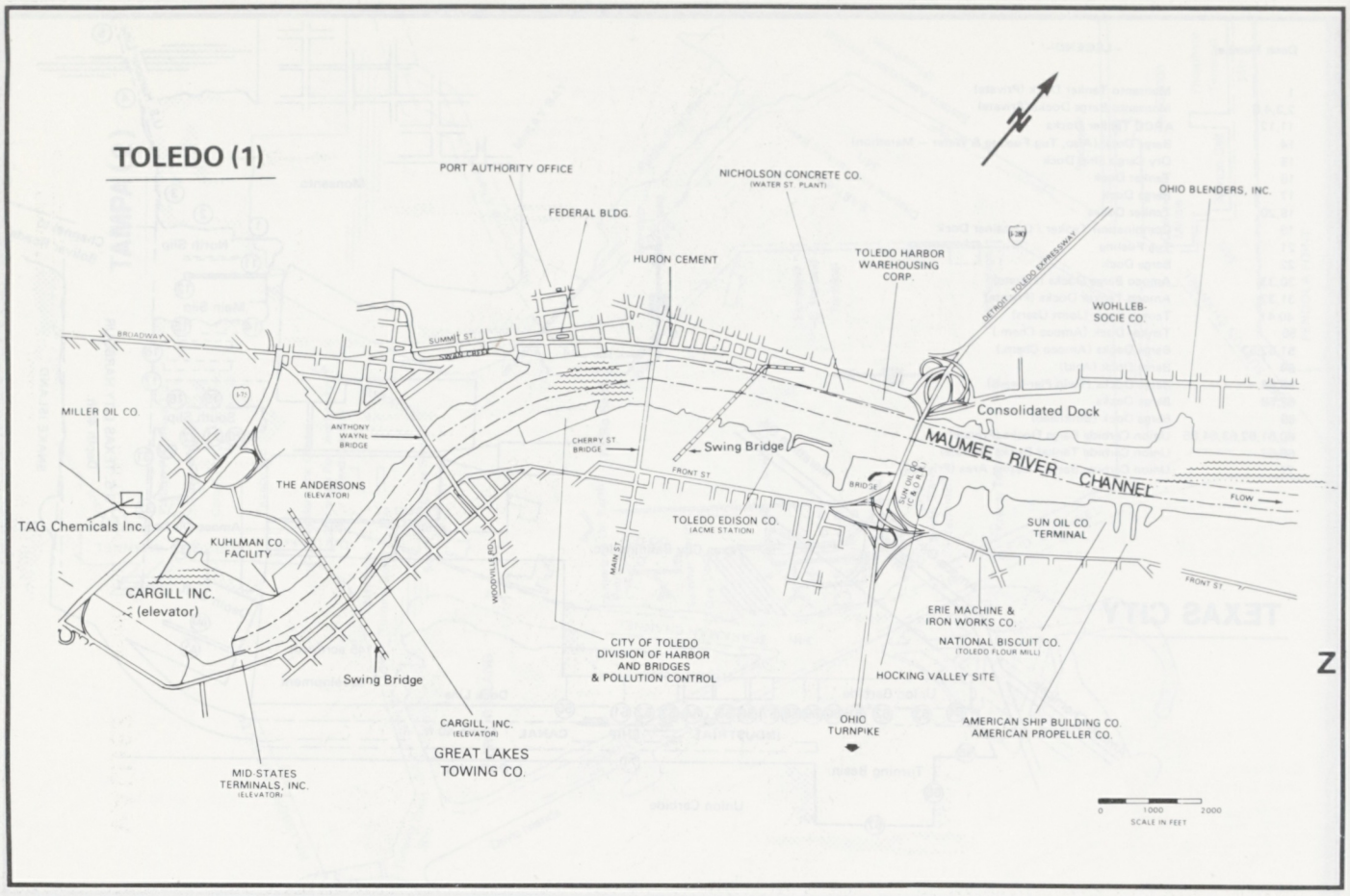

ALAFIA RIVER
Gardinier Inc. U.S. Phosphoric Products
Alafia River
Alafia River Channel 30 ft. Deep

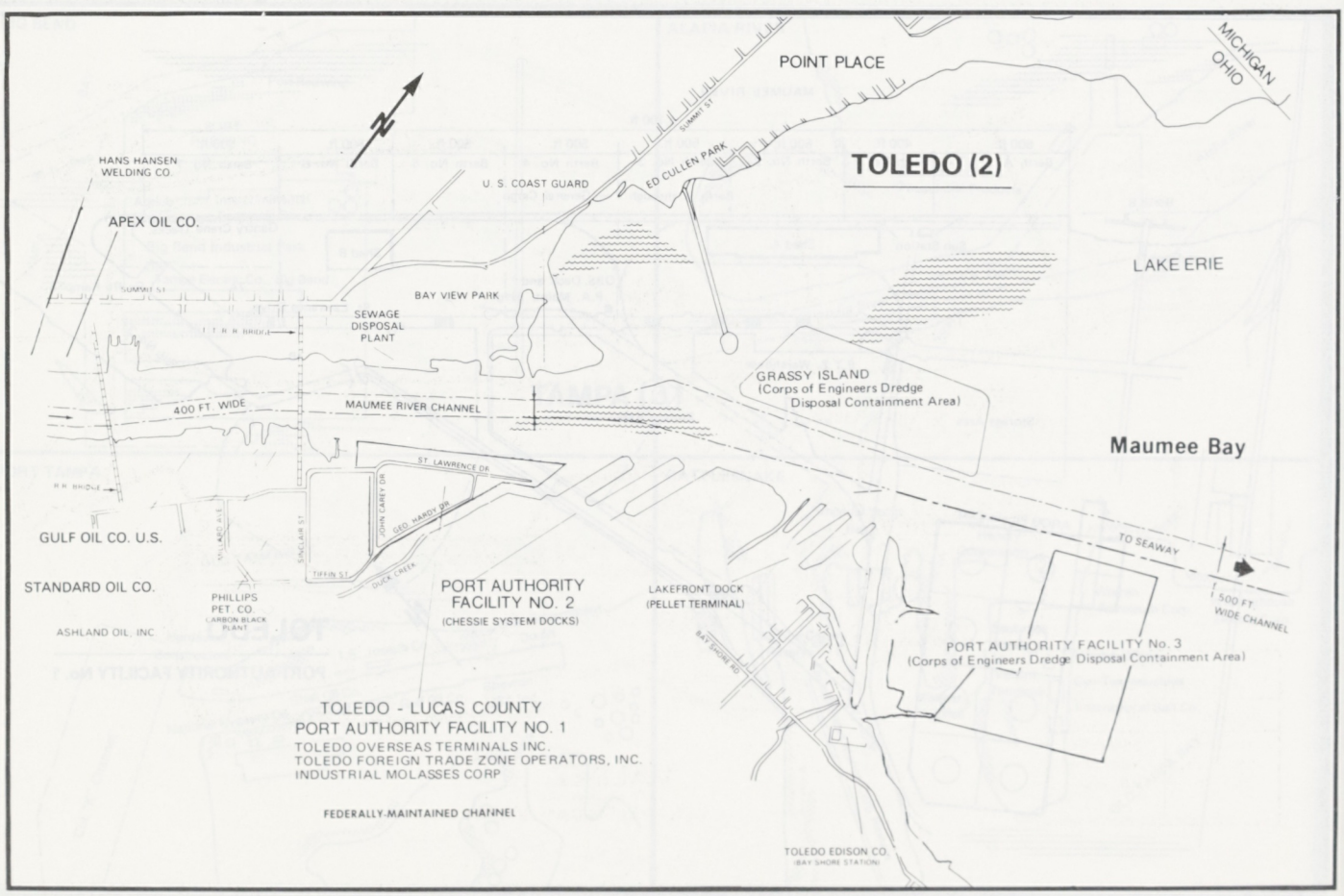

PORT TAMPA
OLD TAMPA BAY
Hardaway Constructors
I.S. Joseph Co.
U.S. Government Docks
Shell Oil Co.
Gulf Oil Co.
Chevron USA Inc.
National Gypsum Co.
Cut "K" Channel

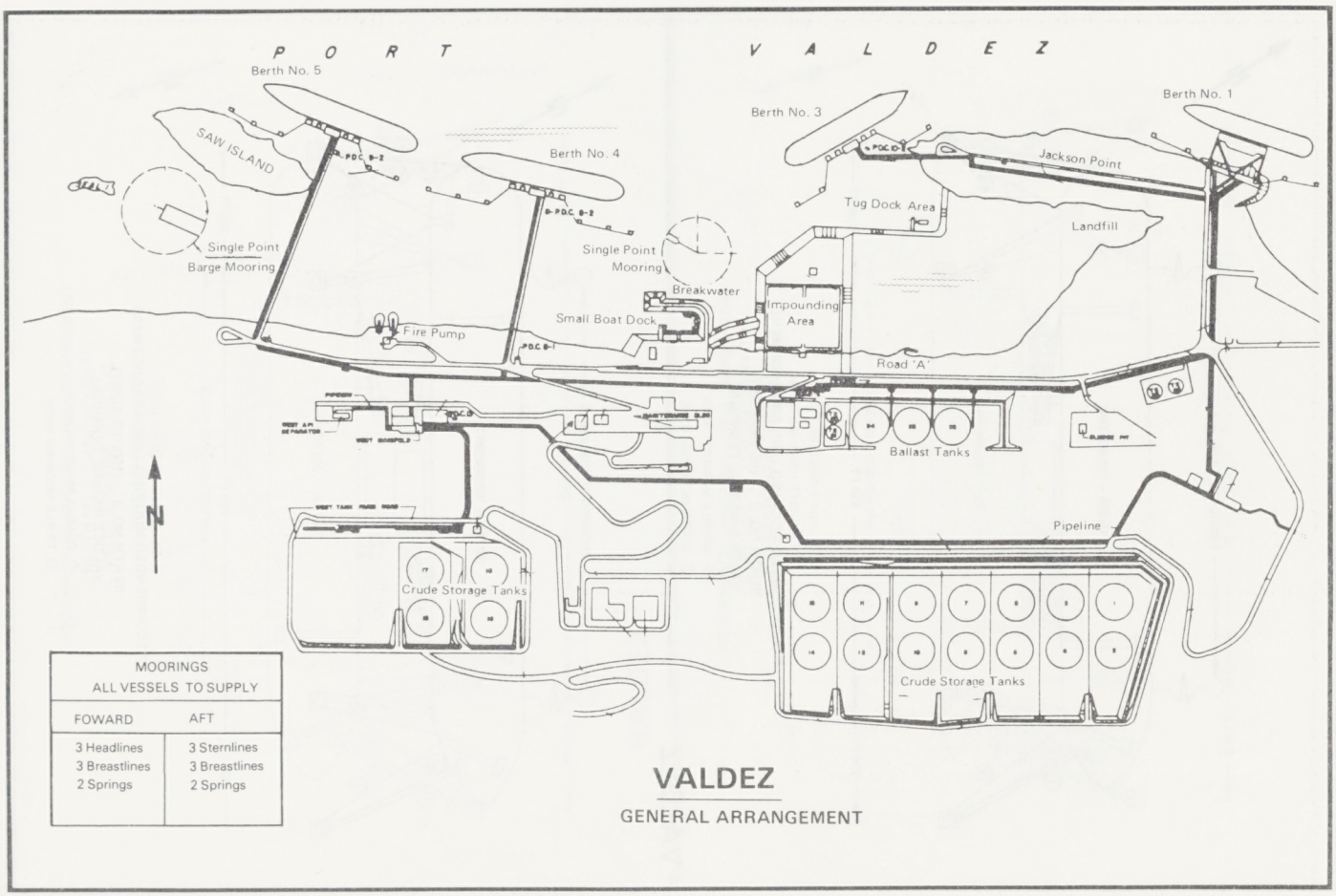

RATTLESNAKE
Imperial Yacht Basin
Hendry Corporation
Warren Petroleum Corp.
Westinghouse Electric Corp.
Marine Corps Reserve
Seabrook Foods, Inc.
(Vacant Terminal)
Interbay Marina
Can-Tex Industries
International Salt Co.
Misener Industries
United States Marine Corp Reserve
OLD TAMPA BAY


Dock Number
–LEGEND–
1 Monsanto Tanker Dock (Private)
2,3,4,5 Monsanto Barge Docks (Private)
11,12 ARCO Tanker Docks
14 Barge Dock (Also, Tug Fueling & Water – Marathon)
15 Dry Cargo Ship Dock
16 Tanker Dock
17 Barge Dock
18,20 Tanker Docks
19 Combination Tanker / Container Dock
21 Tug Fueling
22 Barge Dock
30,33 Amoco Barge Docks (Private)
31,32 Amoco Tanker Docks (Private)
40-41 Tanker Dock (Joint Users)
50 Tanker Dock (Amoco Chem.)
51,52,53 Barge Docks (Amoco Chem.)
54 Barge Dock (Acid)
55,56 Barge Docks (Twin Pier-heads)
57,58 Barge Docks
59 Barge Dock (Bulkhead)
60,61,62,63,64,65 Union Carbide Barge Docks (Private)
66,67 Union Carbide Tanker Docks (Private)
71 Union Carbide Barge Fleeting Area (Private)
TEXAS CITY
Monsanto
U.S. Harbour Line
Channel to Bolivar Roads
North Slip
Main Slip
South Slip
U.S. TEXAS CITY HARBOUR Depth 40 ft.
SNAKE ISLAND
Amoco Oil Co.
Depth 40 ft.
Marathon Oil
Amoco Oil
Texas City Refining Inc.
145 acres for development
Amoco Chemicals
Union Carbide
Dock Line
INDUSTRIAL SHIP CANAL
Depth 40 ft.
Turning Basin
Union Carbide
N


MAUMEE RIVER
4,100 ft.
600 ft. Berth A
400 ft. Berth No. 1
500 ft. Berth No. 2
500 ft. Berth No. 3
500 ft. Berth No. 4
500 ft. Berth No. 5
500 ft. Berth No. 6
600 ft. Berth No. 7
Berth A through 7 – General Cargo
Berth B
Arco Dock
Sub Station
Shed A
Shed B
Gantry Crane Tracks.
OBS. Deck and P.A. Maint. Bldg.
7A
Ro-Ro Ramp
St. Lawrence Drive.
F.T.Z. Warehouse
7B
Slip No. 3
Storage Area
Storage Area
ARCO Pipeline Co
N
TOLEDO
PORT AUTHORITY FACILITY No. 1


TOLEDO (1)
PORT AUTHORITY OFFICE
FEDERAL BLDG.
NICHOLSON CONCRETE CO.
(WATER ST. PLANT)
OHIO BLENDERS, INC.
HURON CEMENT
TOLEDO HARBOR
WAREHOUSING
CORP.
DETROIT - TOLEDO EXPRESSWAY
WOHLLEB-
SOCIE CO.
BROADWAY
SUMMIT ST.
SWAN CREEK
MILLER OIL CO.
ANTHONY
WAYNE
BRIDGE
CHERRY ST.
BRIDGE
Swing Bridge
Consolidated Dock
MAUMEE RIVER CHANNEL
FLOW
FRONT ST.
THE ANDERSONS
(ELEVATOR)
TAG Chemicals Inc.
KUHLMAN CO.
FACILITY
CARGILL INC.
(elevator)
TOLEDO EDISON CO.
(ACME STATION)
SUN OIL CO.
TERMINAL
WOODVILLE RD.
MAIN ST.
ERIE MACHINE &
IRON WORKS CO.
NATIONAL BISCUIT CO.
(TOLEDO FLOUR MILL)
CITY OF TOLEDO
DIVISION OF HARBOR
AND BRIDGES
& POLLUTION CONTROL
HOCKING VALLEY SITE
Swing Bridge
CARGILL, INC.
(ELEVATOR)
GREAT LAKES
TOWING CO.
OHIO
TURNPIKE
AMERICAN SHIP BUILDING CO.
AMERICAN PROPELLER CO.
MID-STATES
TERMINALS, INC.
(ELEVATOR)
0
1000
2000
SCALE IN FEET
Z

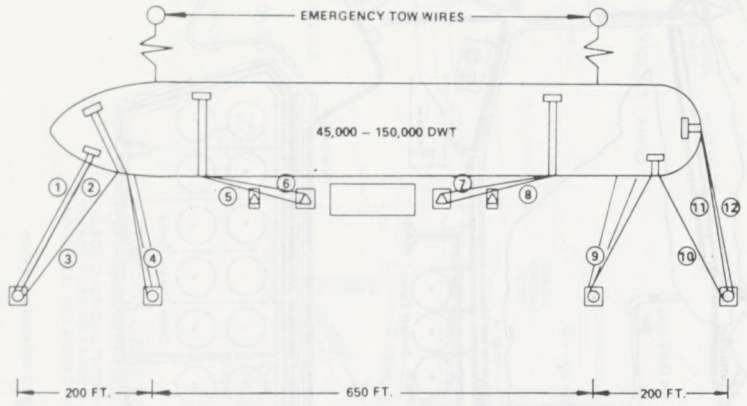

TOLEDO (2)
POINT PLACE
MICHIGAN
OHIO
HANS HANSEN
WELDING CO.
APEX OIL CO.
U. S. COAST GUARD
ED CULLEN PARK
SUMMIT ST.
LAKE ERIE
BAY VIEW PARK
SEWAGE
DISPOSAL
PLANT
T. T. R. R. BRIDGE
GRASSY ISLAND
(Corps of Engineers Dredge
Disposal Containment Area)
400 FT. WIDE
MAUMEE RIVER CHANNEL
Maumee Bay
ST. LAWRENCE DR.
R.R. BRIDGE
GULF OIL CO. U.S.
SINCLAIR ST.
JOHN CAREY DR.
GEO. HARDY DR.
TO SEAWAY
500 FT.
WIDE CHANNEL
STANDARD OIL CO.
TIFFIN ST.
DUCK CREEK
PHILLIPS
PET. CO.
CARBON BLACK
PLANT
ASHLAND OIL, INC.
PORT AUTHORITY
FACILITY NO. 2
(CHESSIE SYSTEM DOCKS)
LAKEFRONT DOCK
(PELLET TERMINAL)
BAY SHORE RD.
PORT AUTHORITY FACILITY No. 3
(Corps of Engineers Dredge Disposal Containment Area)
TOLEDO - LUCAS COUNTY
PORT AUTHORITY FACILITY NO. 1
TOLEDO OVERSEAS TERMINALS INC.
TOLEDO FOREIGN TRADE ZONE OPERATORS, INC.
INDUSTRIAL MOLASSES CORP.
FEDERALLY-MAINTAINED CHANNEL
TOLEDO EDISON CO.
(BAY SHORE STATION)



VALDEZ

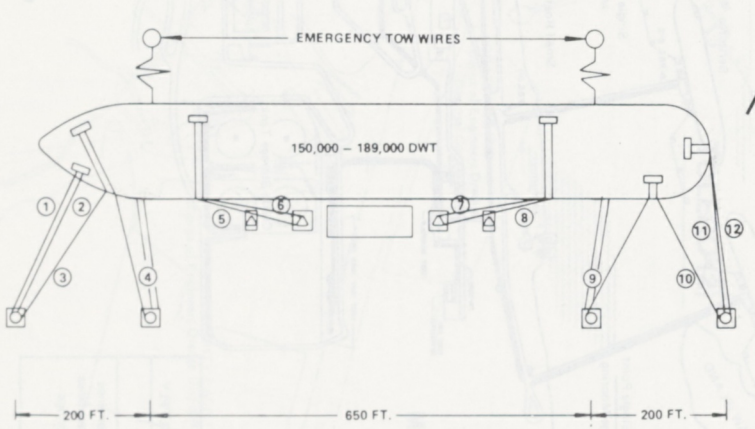
GENERAL ARRANGEMENT

VALDEZ



RECOMMENDED MOORING LINE ARRANGEMENT
BERTH NO. 3 (45-150 KDWT)
VALDEZ MARINE TERMINAL

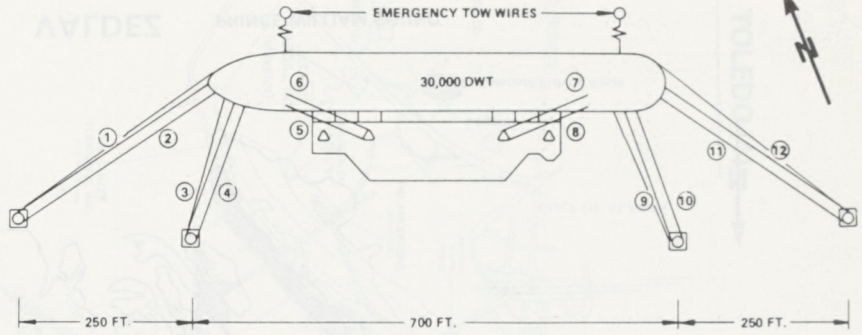
△ DOUBLE MOORING HOOK
○ TRIPLE MOORING HOOK



RECOMMENDED MOORING LINE ARRANGEMENT
BERTH NO. 3 (150-189 KDWT)
VALDEZ MARINE TERMINAL

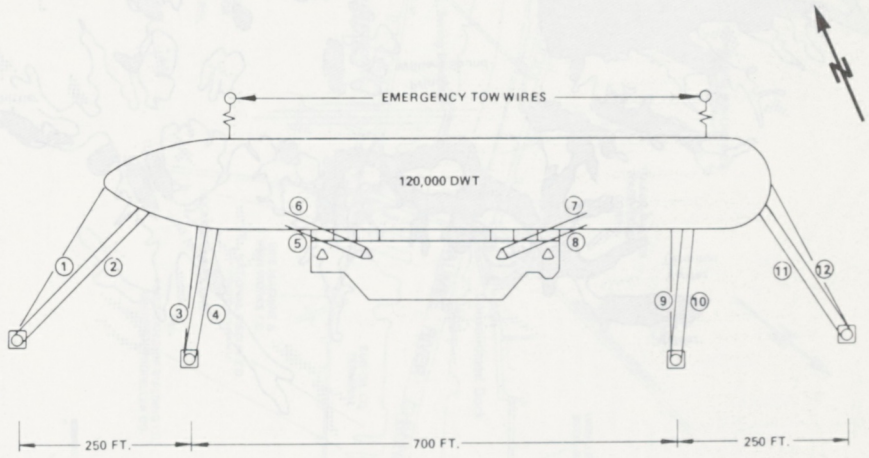
△ DOUBLE MOORING HOOK
○ TRIPLE MOORING HOOK

VALDEZ



RECOMMENDED MOORING LINE ARRANGEMENT
BERTH NO. 1 (30 KDWT)
VALDEZ MARINE TERMINAL

△ DOUBLE MOORING HOOK
○ TRIPLE MOORING HOOK

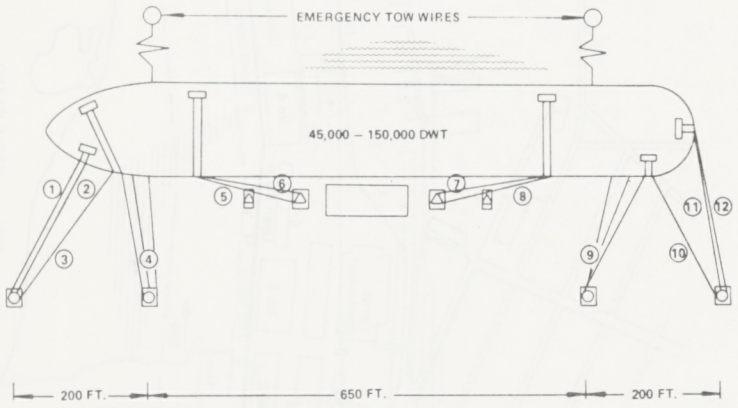


RECOMMENDED MOORING LINE ARRANGEMENT
BERTH NO. 1 (120 KDWT)
VALDEZ MARINE TERMINAL

△ DOUBLE MOORING HOOK
○ TRIPLE MOORING HOOK

RECOMMENDED MOORING LINE ARRANGEMENT
BERTH NO. 5 (45-150 KDWT)
VALDEZ MARINE TERMINAL

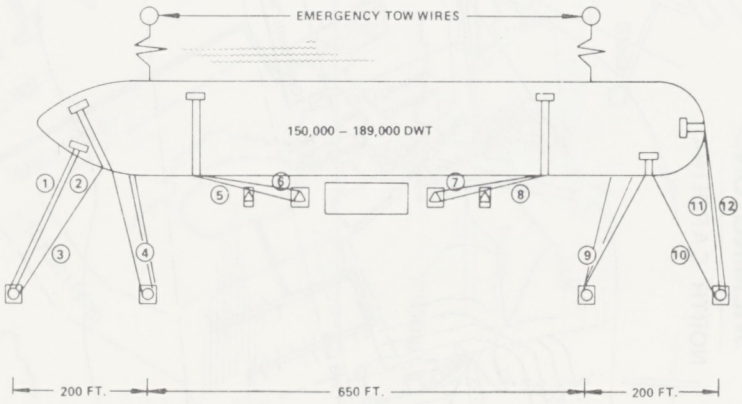
△ DOUBLE MOORING HOOK
○ TRIPLE MOORING HOOK

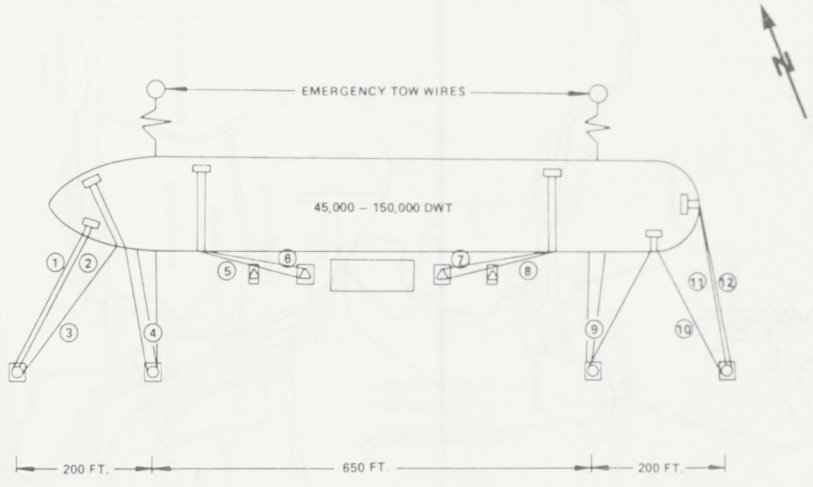


VALDEZ

RECOMMENDED MOORING LINE ARRANGEMENT
BERTH NO. 5 (150-189 KDWT)
VALDEZ MARINE TERMINAL

△ DOUBLE MOORING HOOK
○ TRIPLE MOORING HOOK

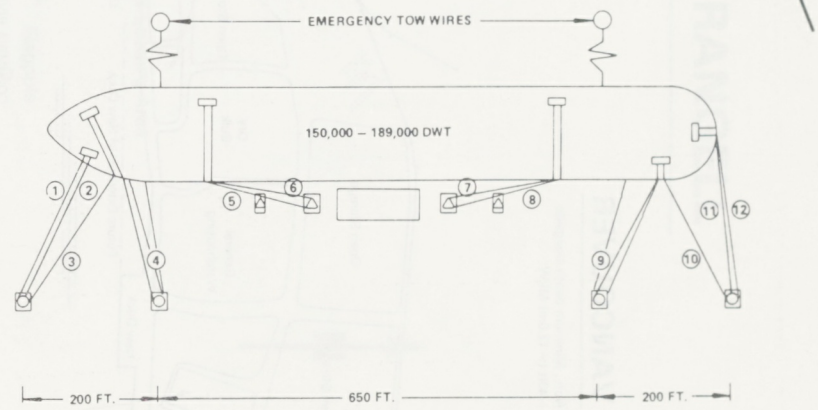




RECOMMENDED MOORING LINE ARRANGEMENT
BERTH NO. 4 (45-150 KDWT)
VALDEZ MARINE TERMINAL

△ DOUBLE MOORING HOOK
○ TRIPLE MOORING HOOK

VALDEZ

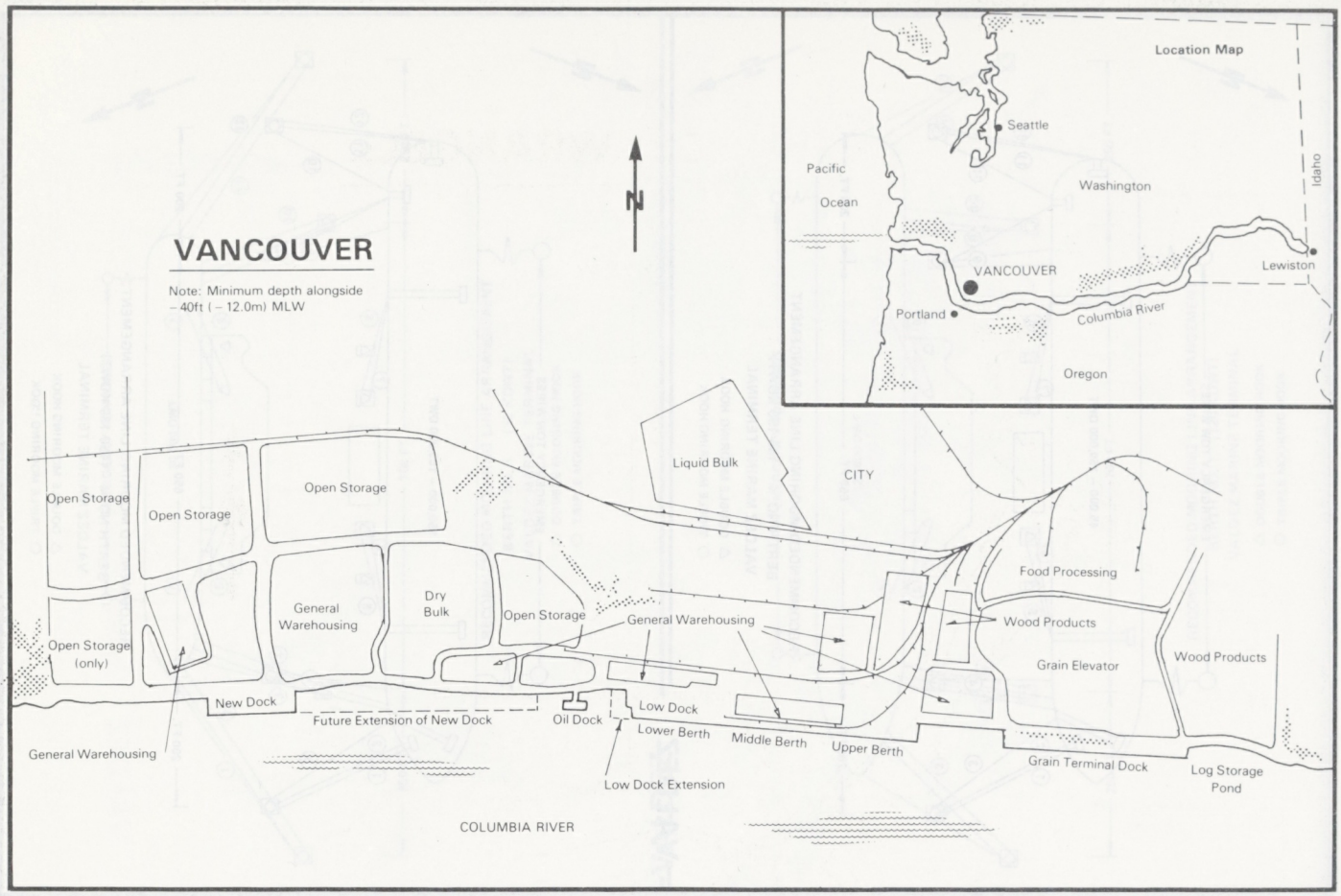


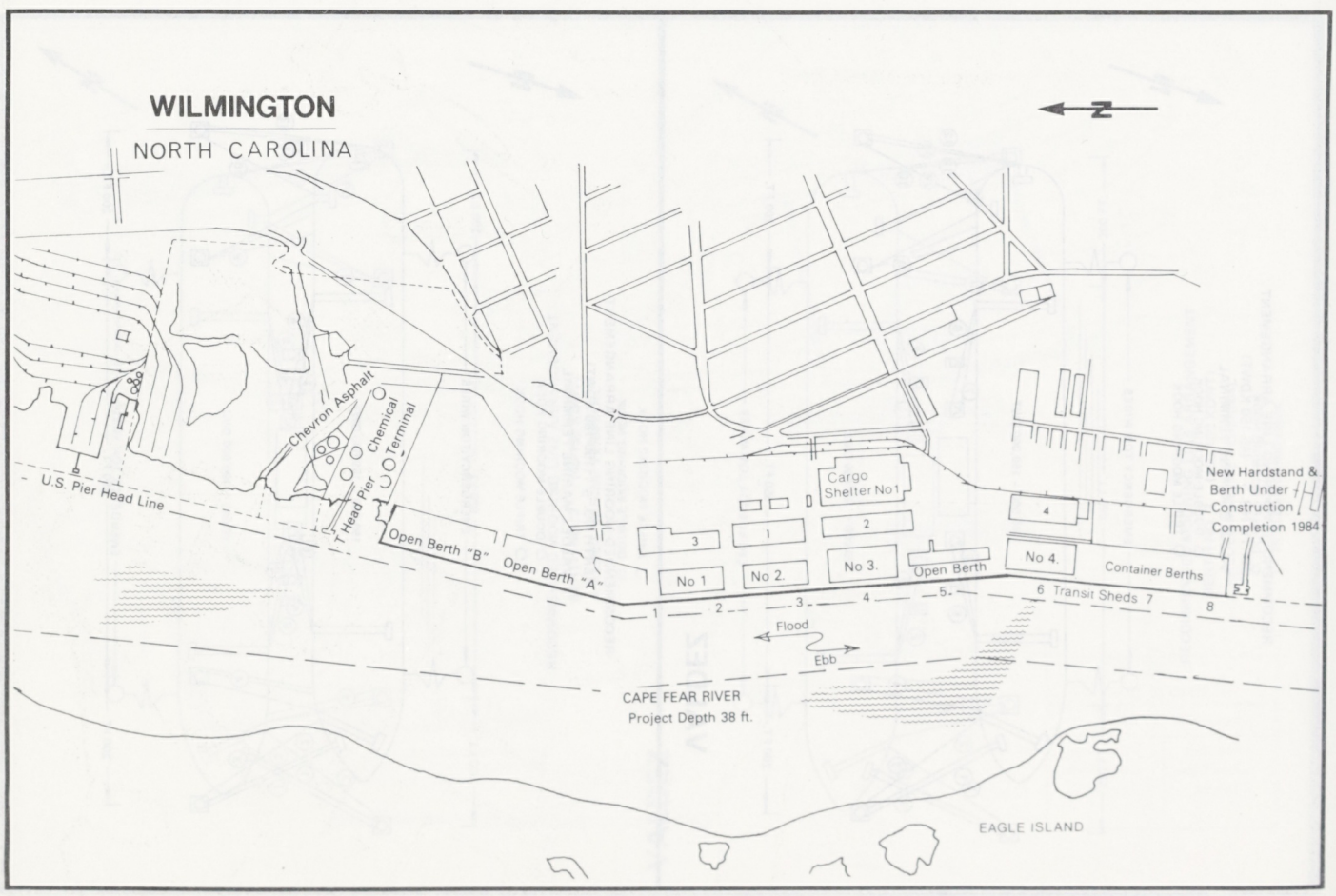
RECOMMENDED MOORING LINE ARRANGEMENT
BERTH NO. 4 (150-189 KDWT)
VALDEZ MARINE TERMINAL

△ DOUBLE MOORING HOOK
○ TRIPLE MOORING HOOK

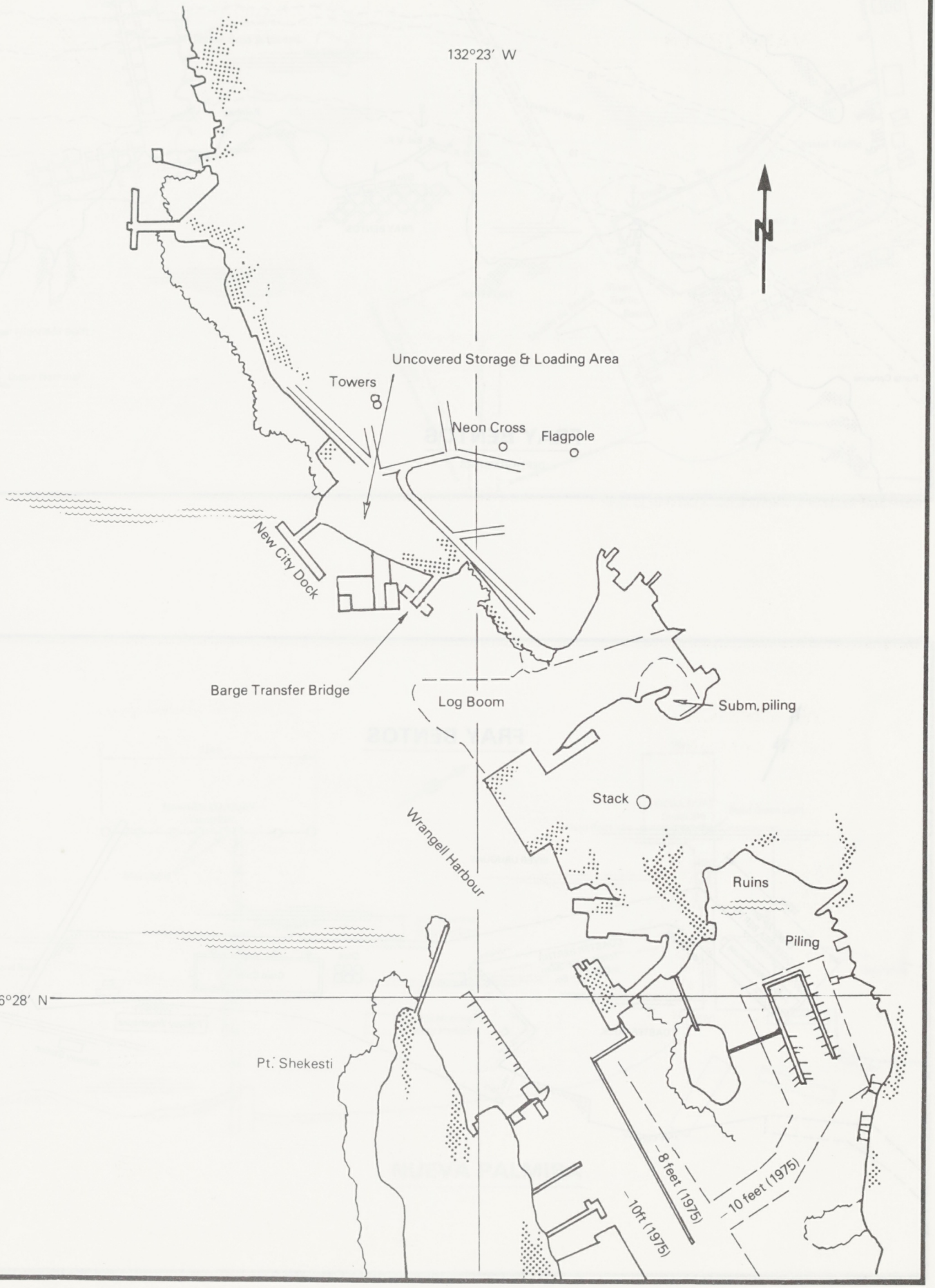
P955

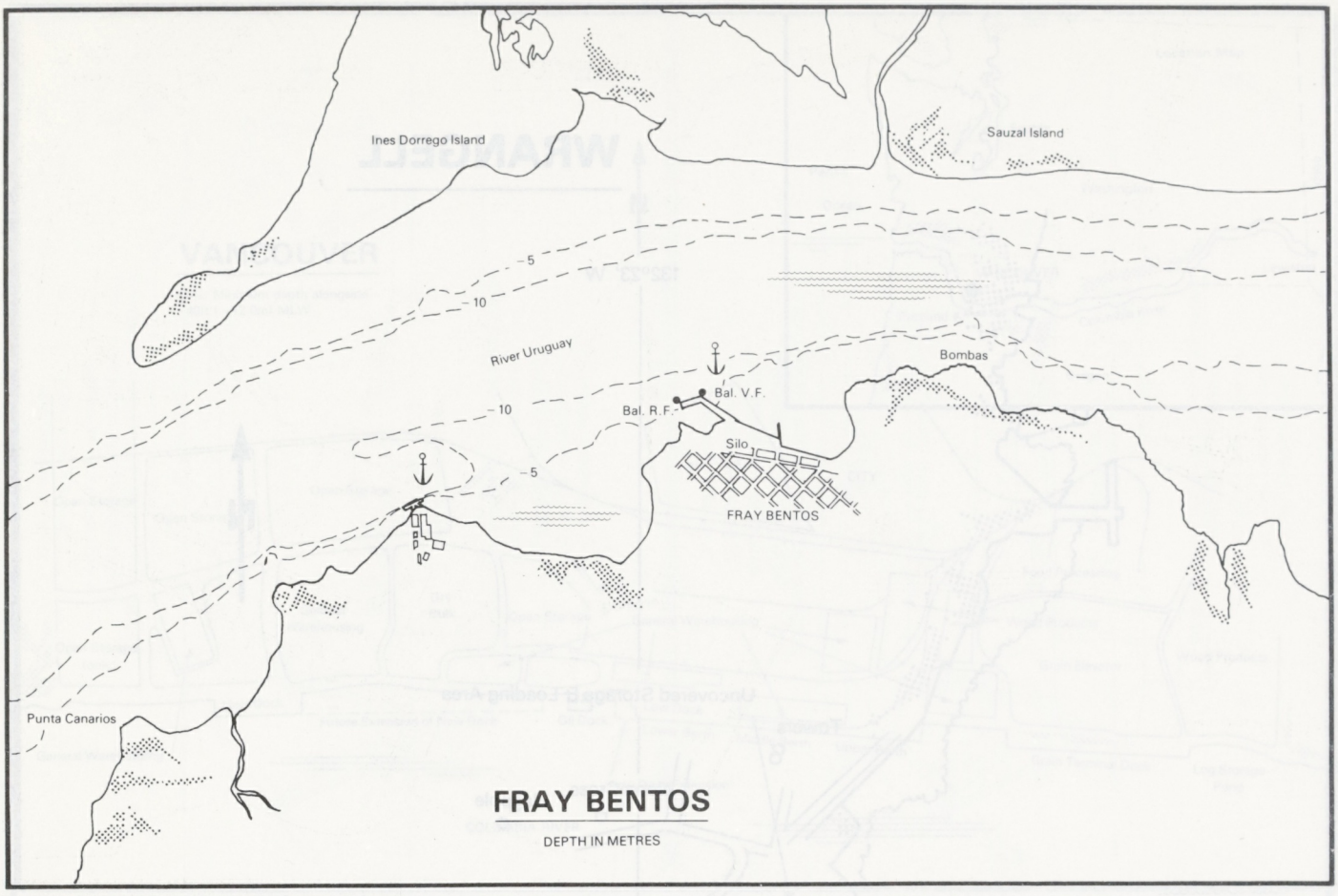
U.S.A.


VANCOUVER
Note: Minimum depth alongside
-40ft (-12.0m) MLW
N
Location Map
Seattle
Pacific
Ocean
Washington
Idaho
VANCOUVER
Lewiston
Portland
Columbia River
Oregon
Liquid Bulk
CITY
Open Storage
Open Storage
Open Storage
General Warehousing
Dry Bulk
Open Storage
General Warehousing
Food Processing
Wood Products
Grain Elevator
Wood Products
Open Storage (only)
New Dock
Future Extension of New Dock
Oil Dock
Low Dock
Lower Berth
Middle Berth
Upper Berth
Grain Terminal Dock
Log Storage Pond
General Warehousing
Low Dock Extension
COLUMBIA RIVER


WILMINGTON
NORTH CAROLINA
N
Chevron Asphalt
Chemical Terminal
T Head Pier
U.S. Pier Head Line
Cargo Shelter No 1
New Hardstand & Berth Under Construction Completion 1984
Open Berth "B"
Open Berth "A"
No 1
No 2.
No 3.
Open Berth
No 4.
Container Berths
Transit Sheds
Flood
Ebb
CAPE FEAR RIVER
Project Depth 38 ft.
EAGLE ISLAND

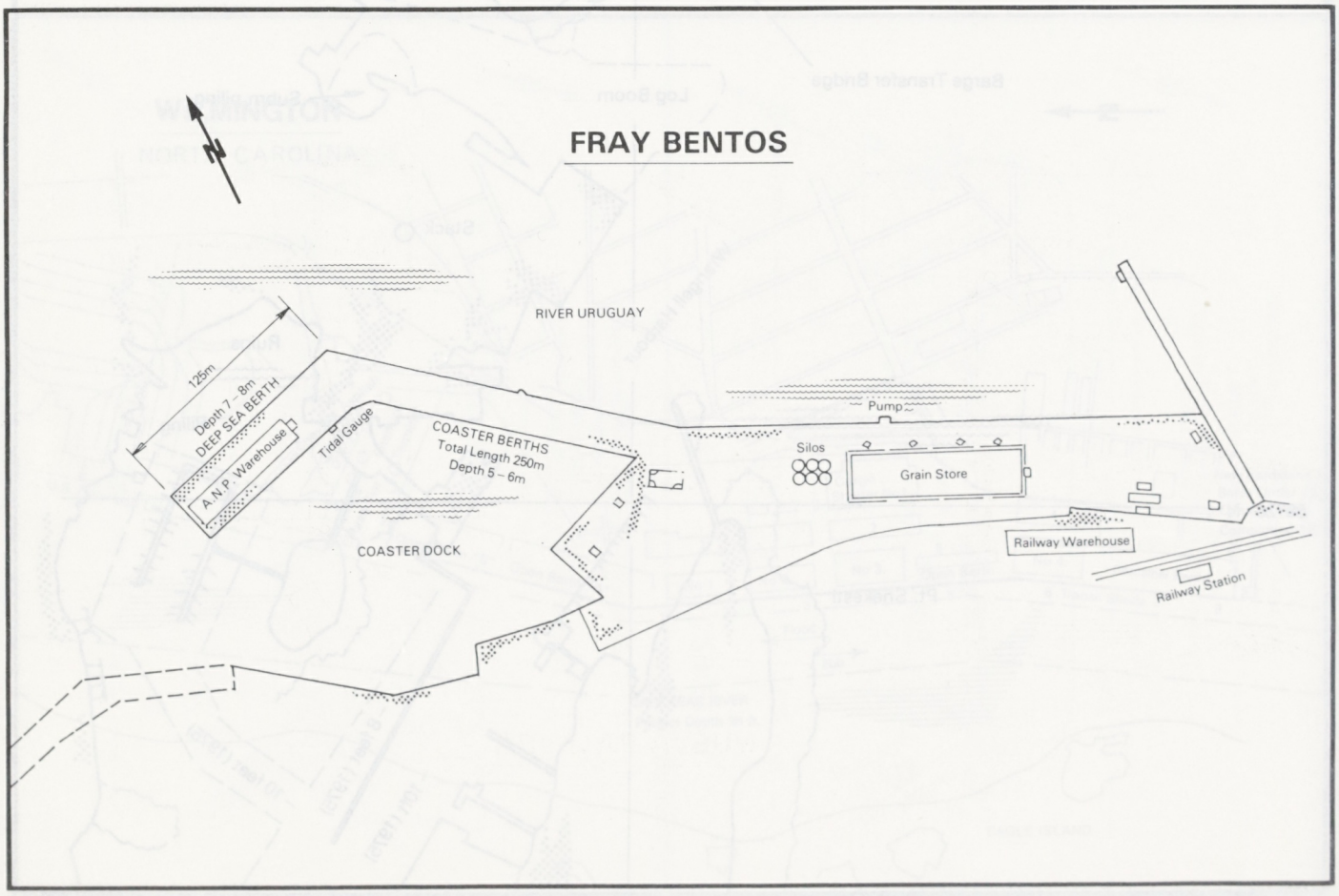
WRANGELL

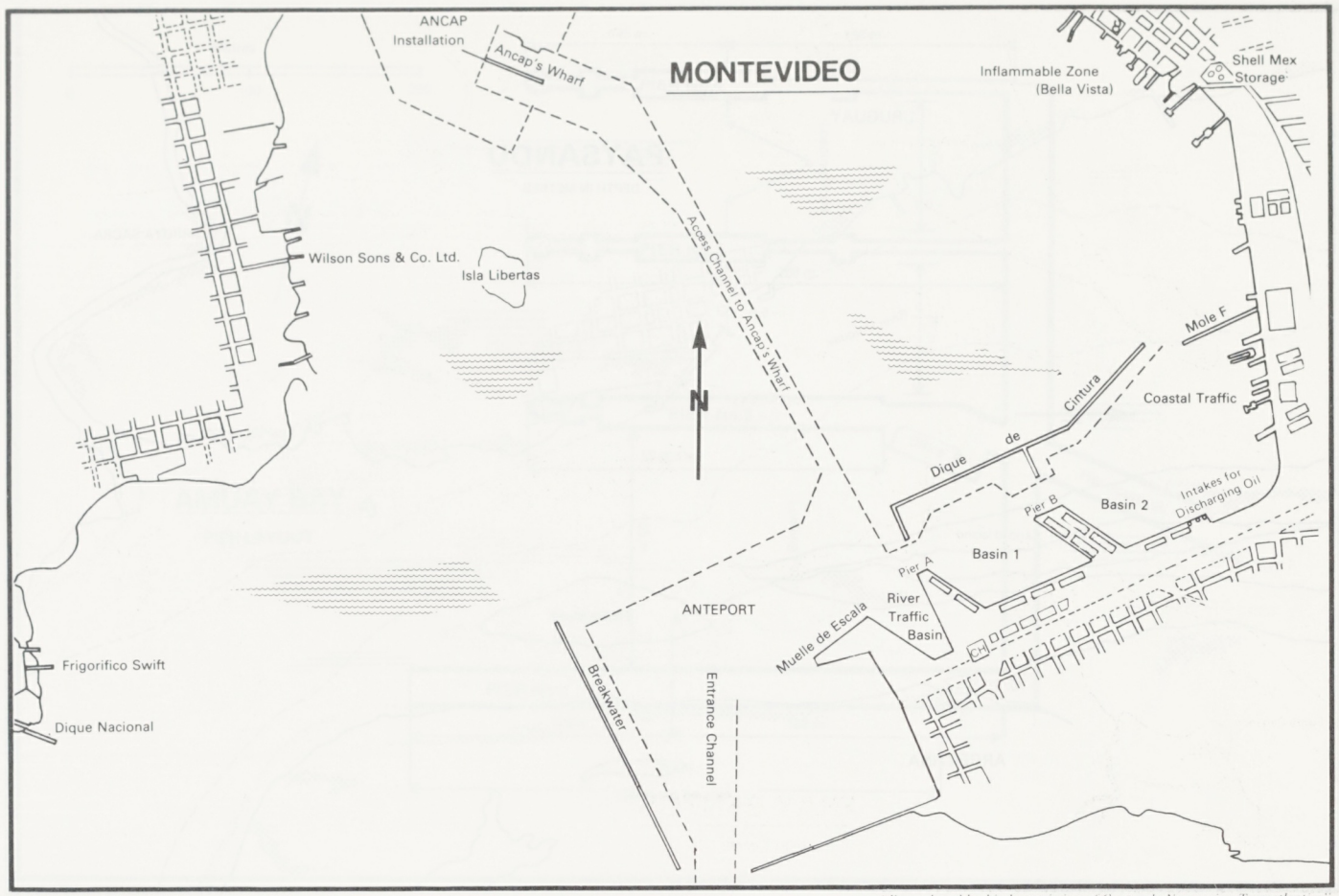

132°23′ W
N
Uncovered Storage & Loading Area
Towers
Neon Cross
Flagpole
New City Dock
Barge Transfer Bridge
Log Boom
Subm. piling
Stack
Wrangell Harbour
Ruins
Piling
56°28′ N
Pt. Shekesti
8 feet (1975)
10 feet (1975)
10ft (1975)



FRAY BENTOS

DEPTH IN METRES





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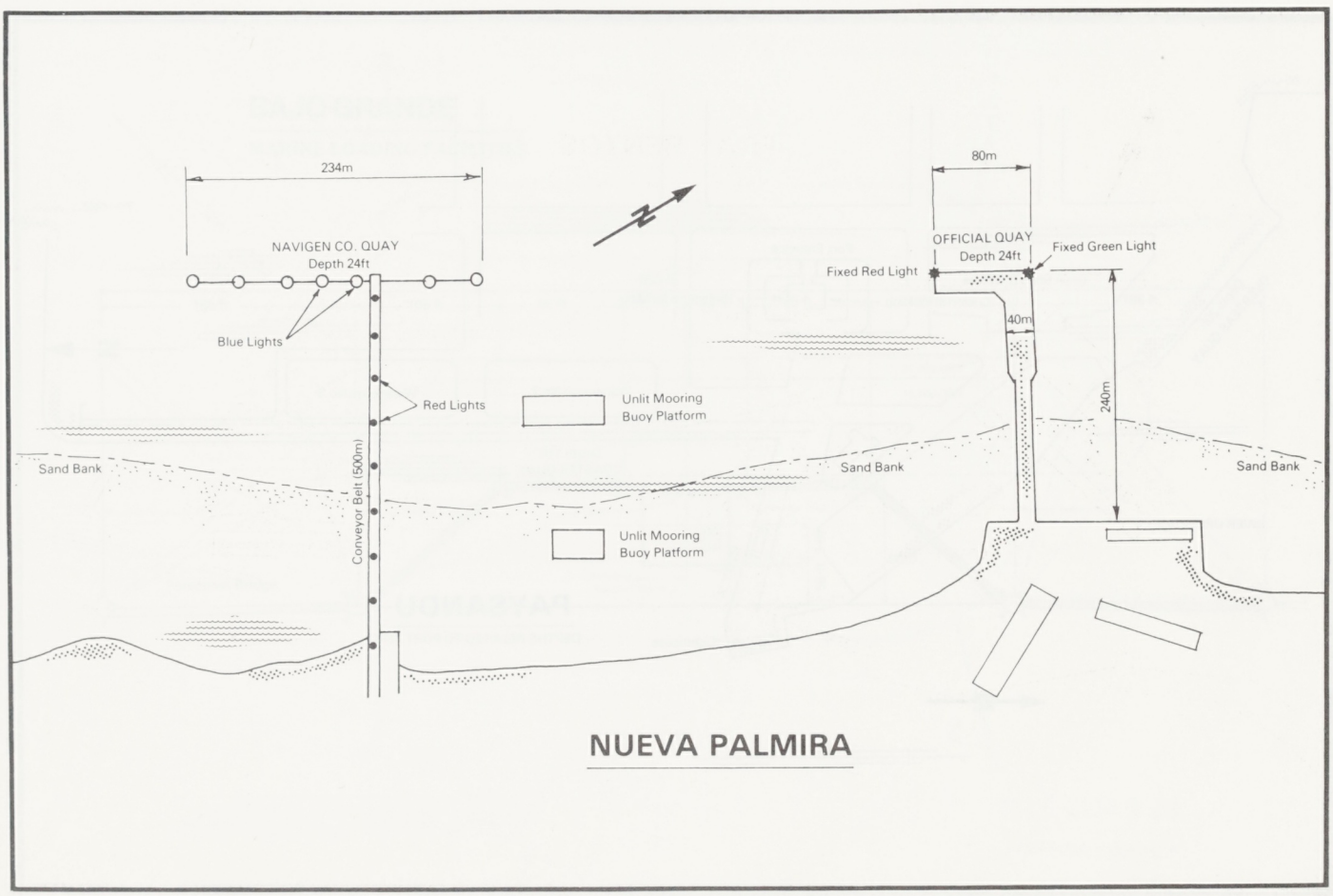
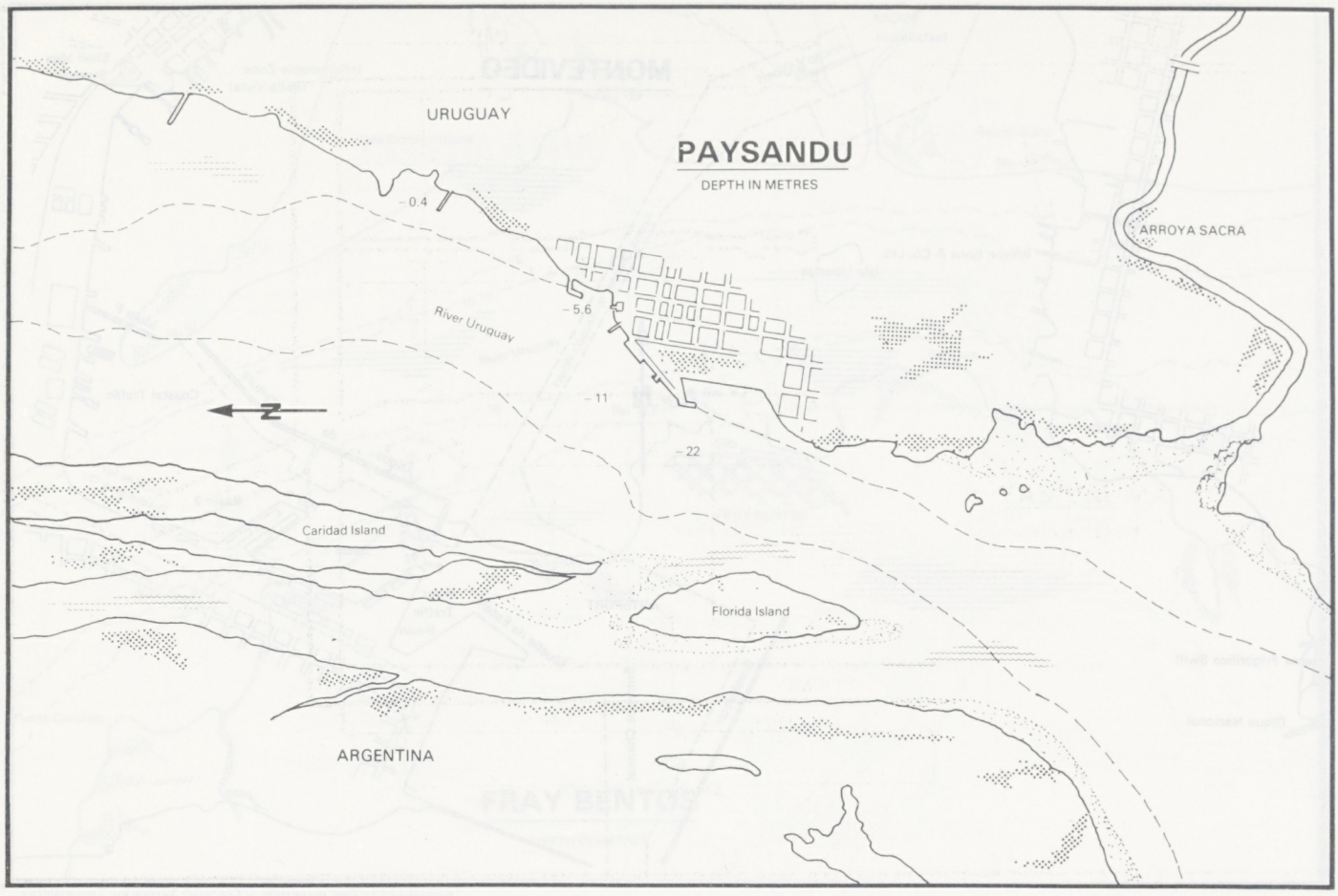
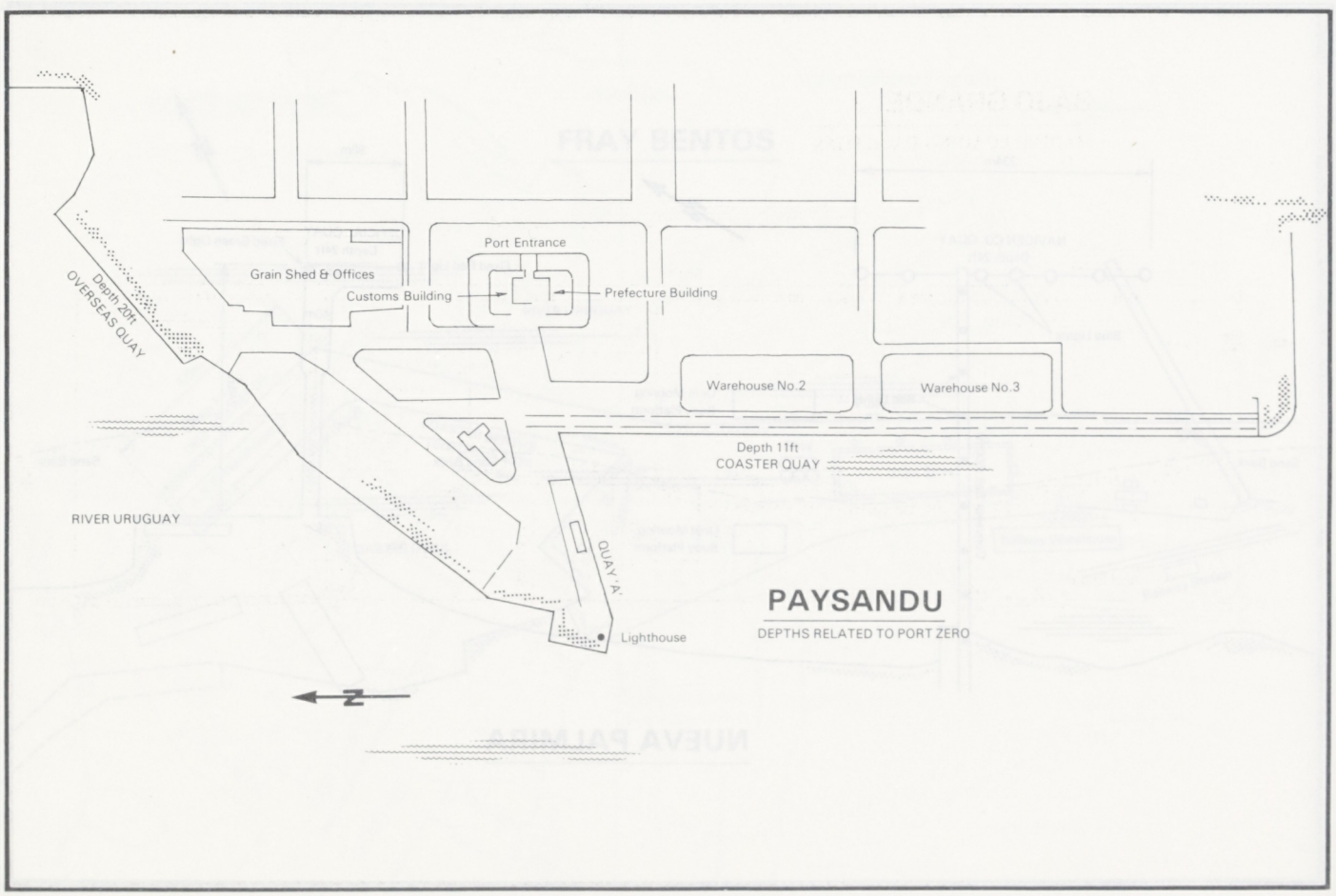
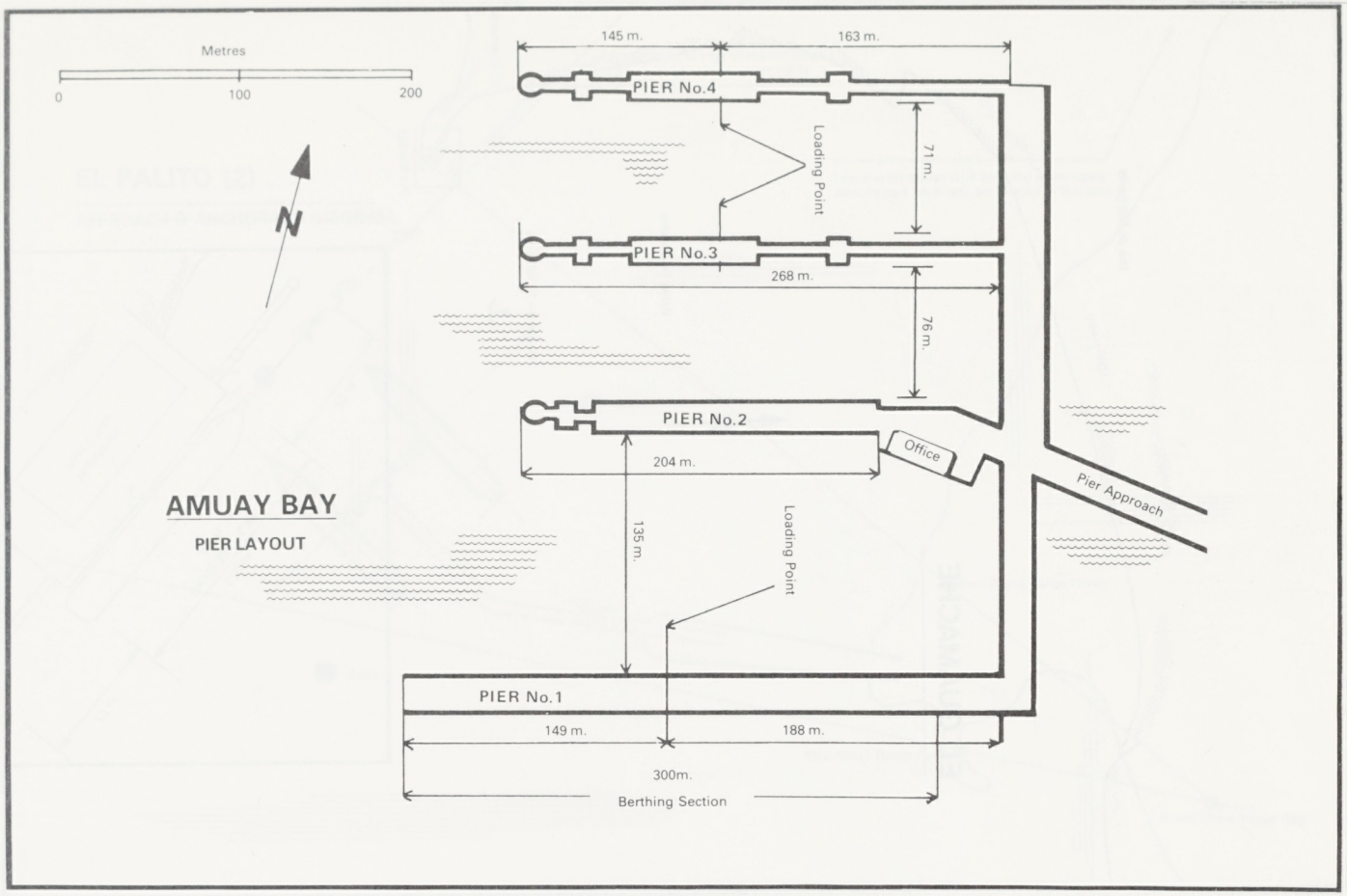


NUEVA PALMIRA


URUGUAY
PAYSANDU
DEPTH IN METRES
-0.4
-5.6
-11
-22
River Uruguay
ARROYA SACRA
Caridad Island
Florida Island
ARGENTINA


Port Entrance
Grain Shed & Offices
Customs Building
Prefecture Building
Depth 20ft
OVERSEAS QUAY
Warehouse No.2
Warehouse No.3
Depth 11ft
COASTER QUAY
RIVER URUGUAY
QUAY 'A'
Lighthouse
PAYSANDU
DEPTHS RELATED TO PORT ZERO

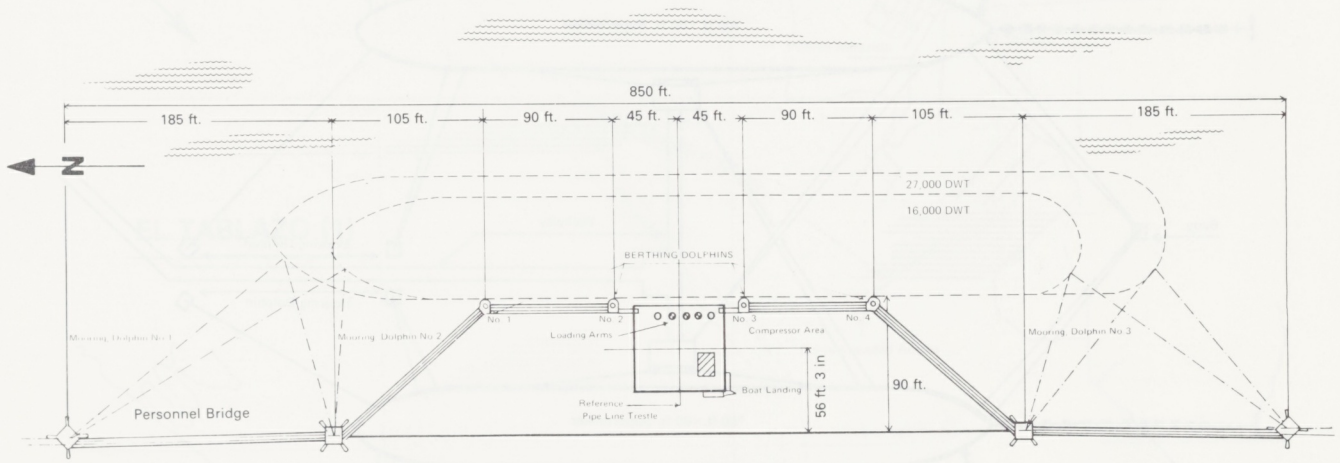


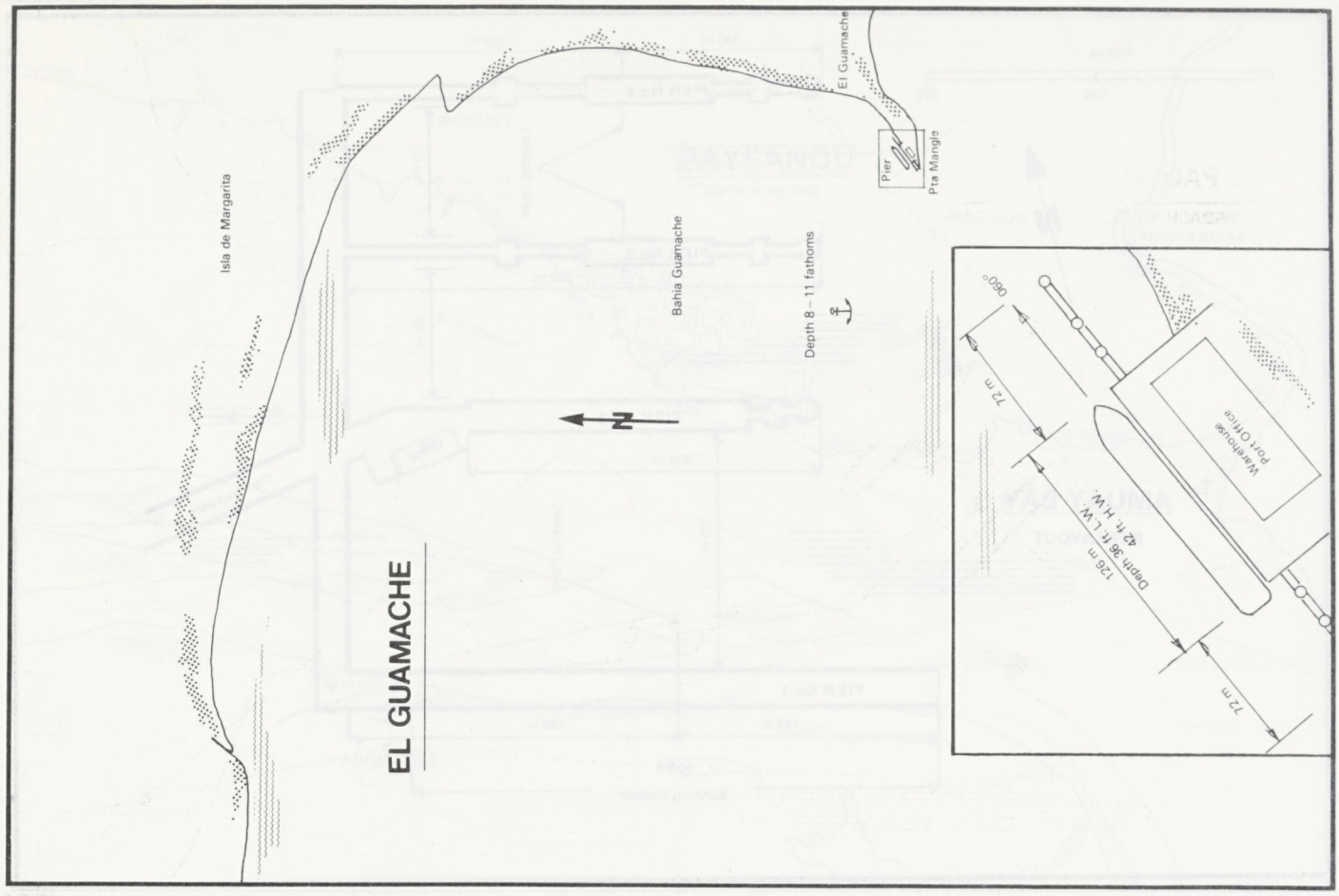
AMUAY BAY

PIER LAYOUT

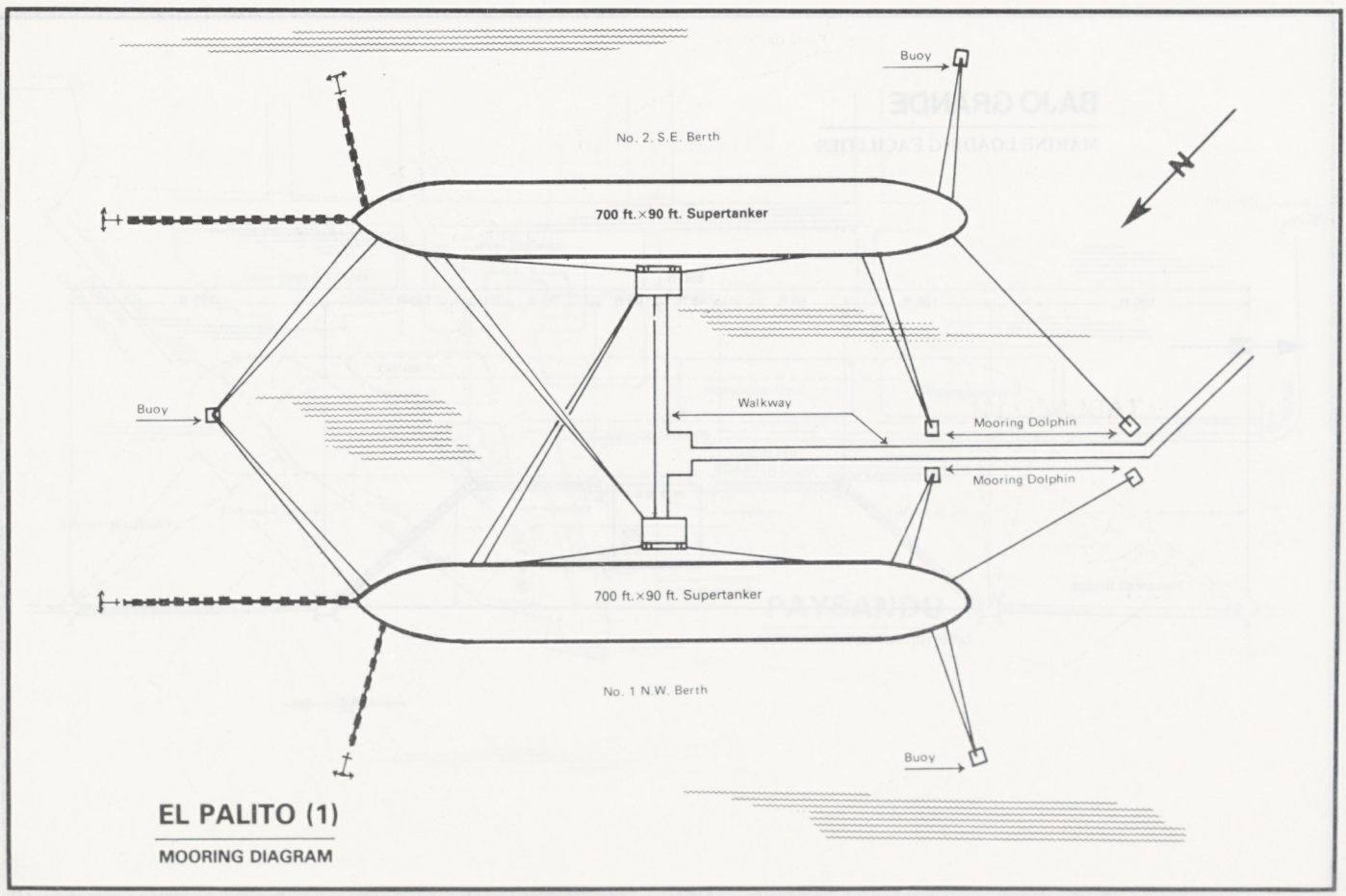
BAJO GRANDE

MARINE LOADING FACILITIES



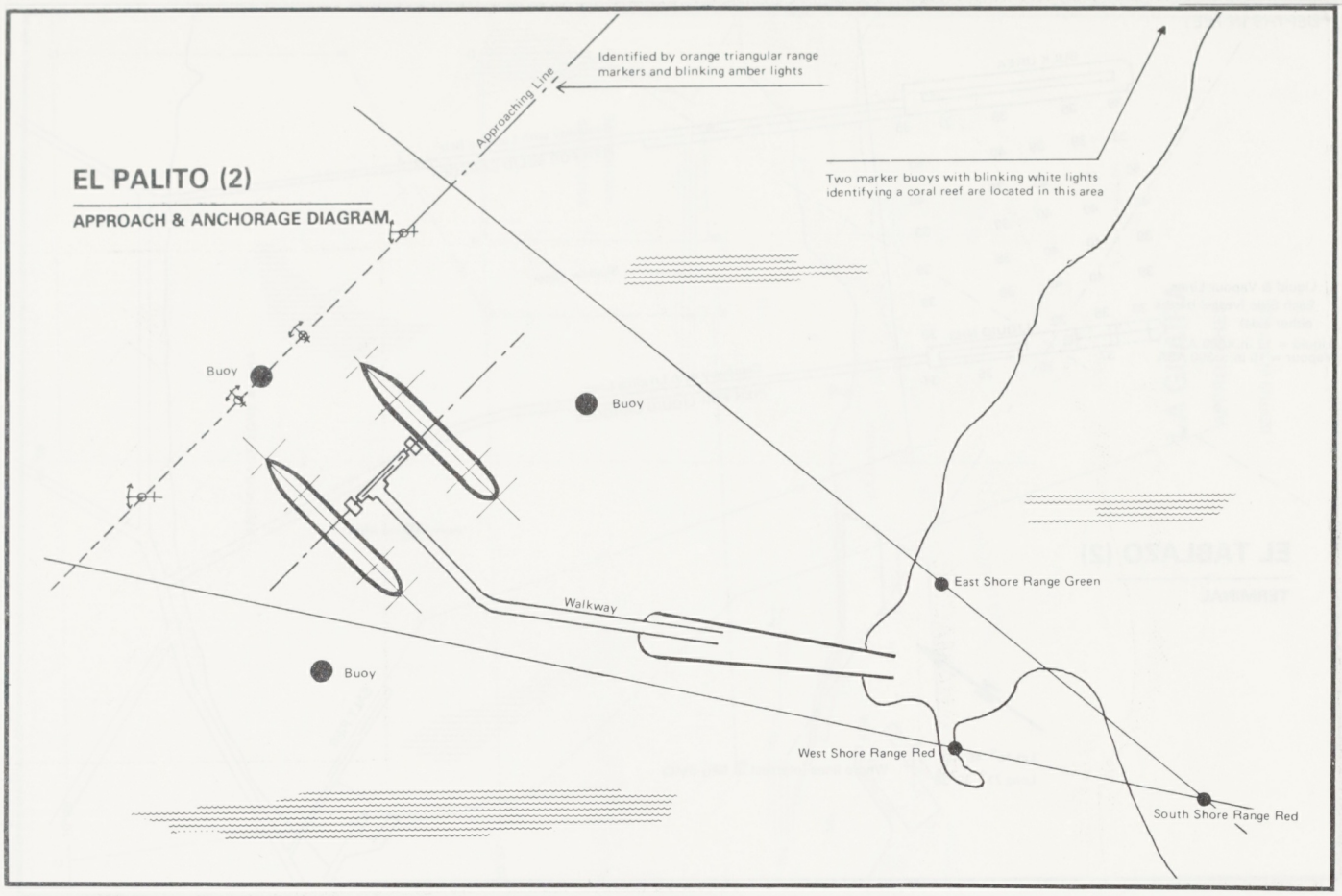


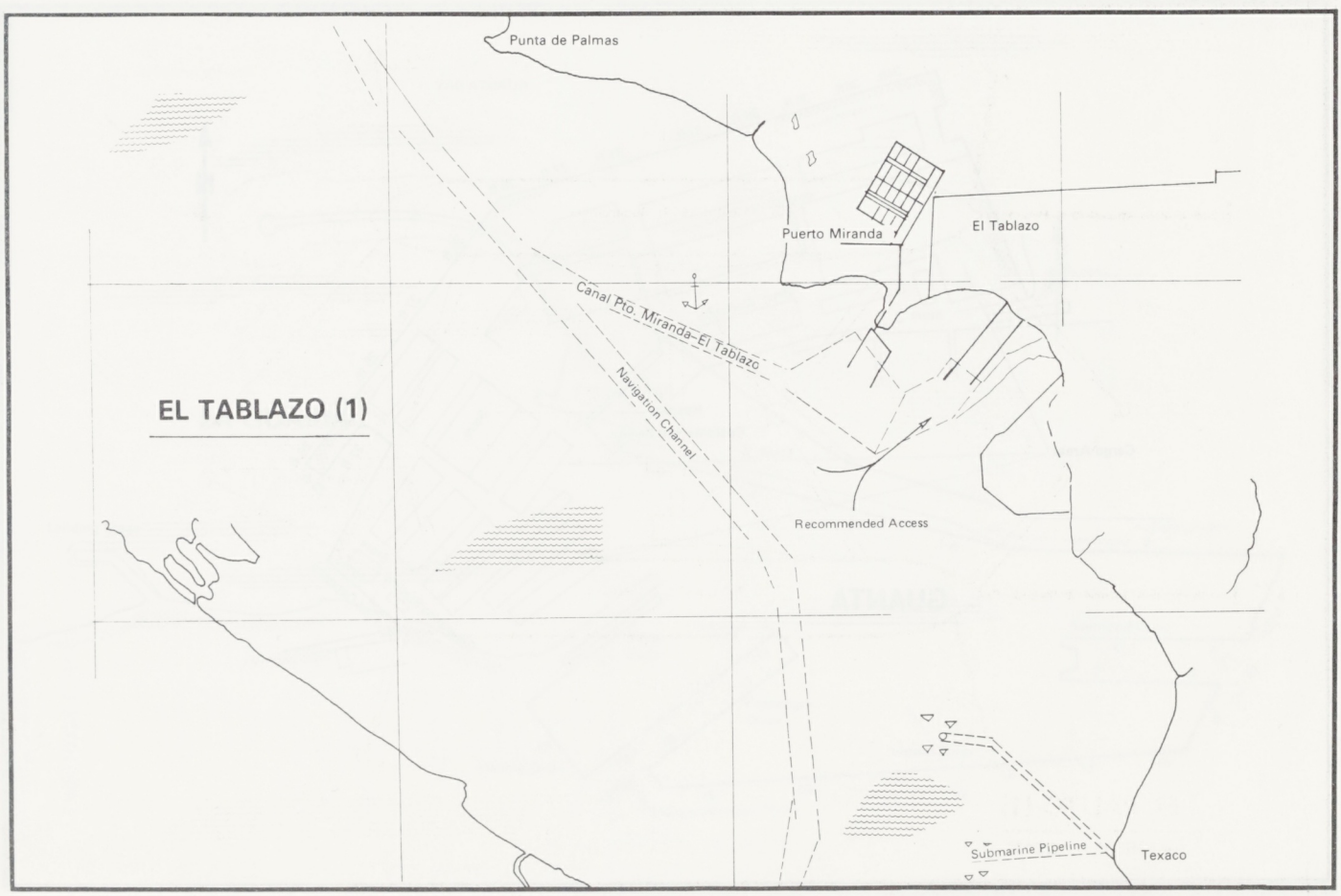
"Plan supplied by Ship's Master"

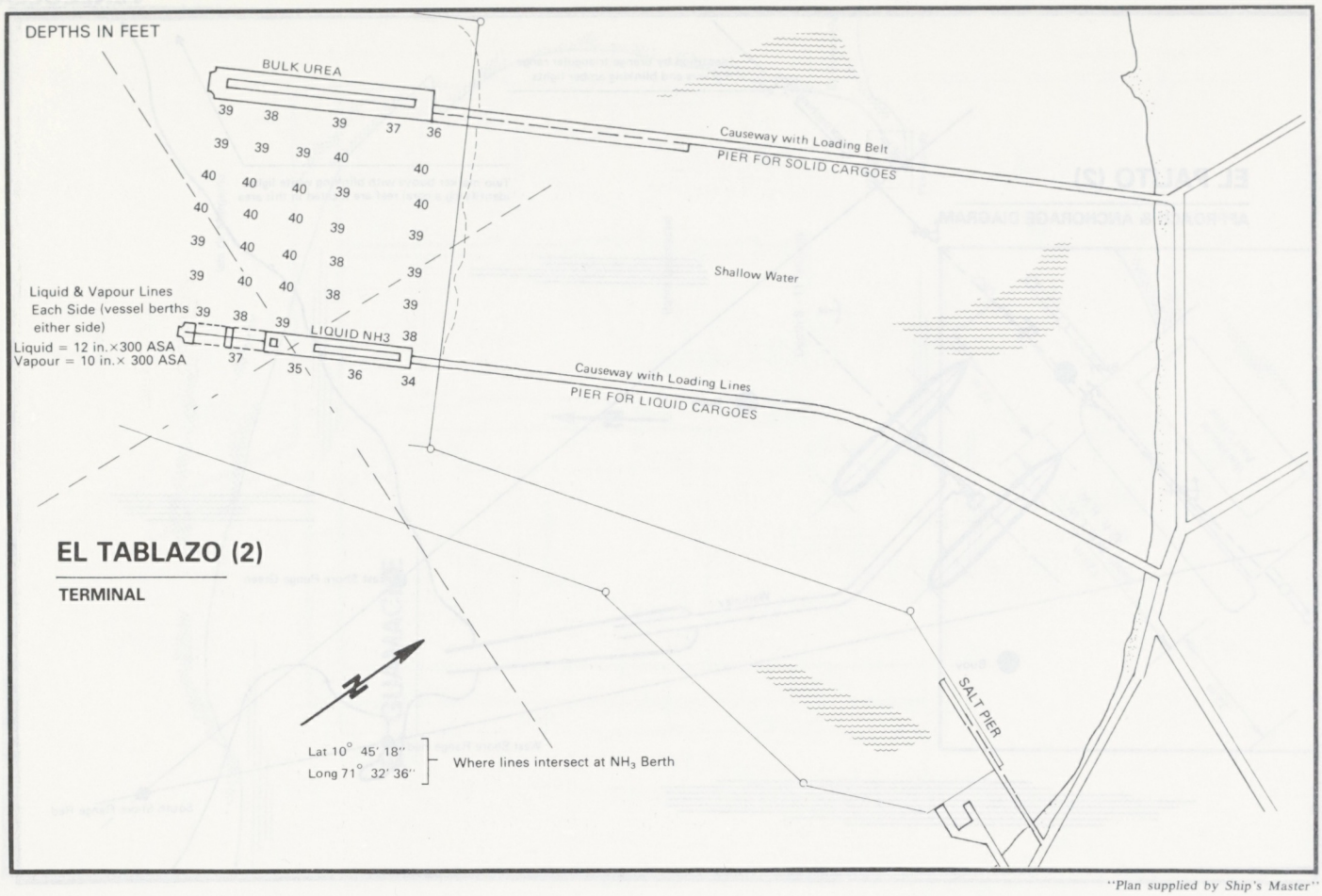


EL PALITO (1)

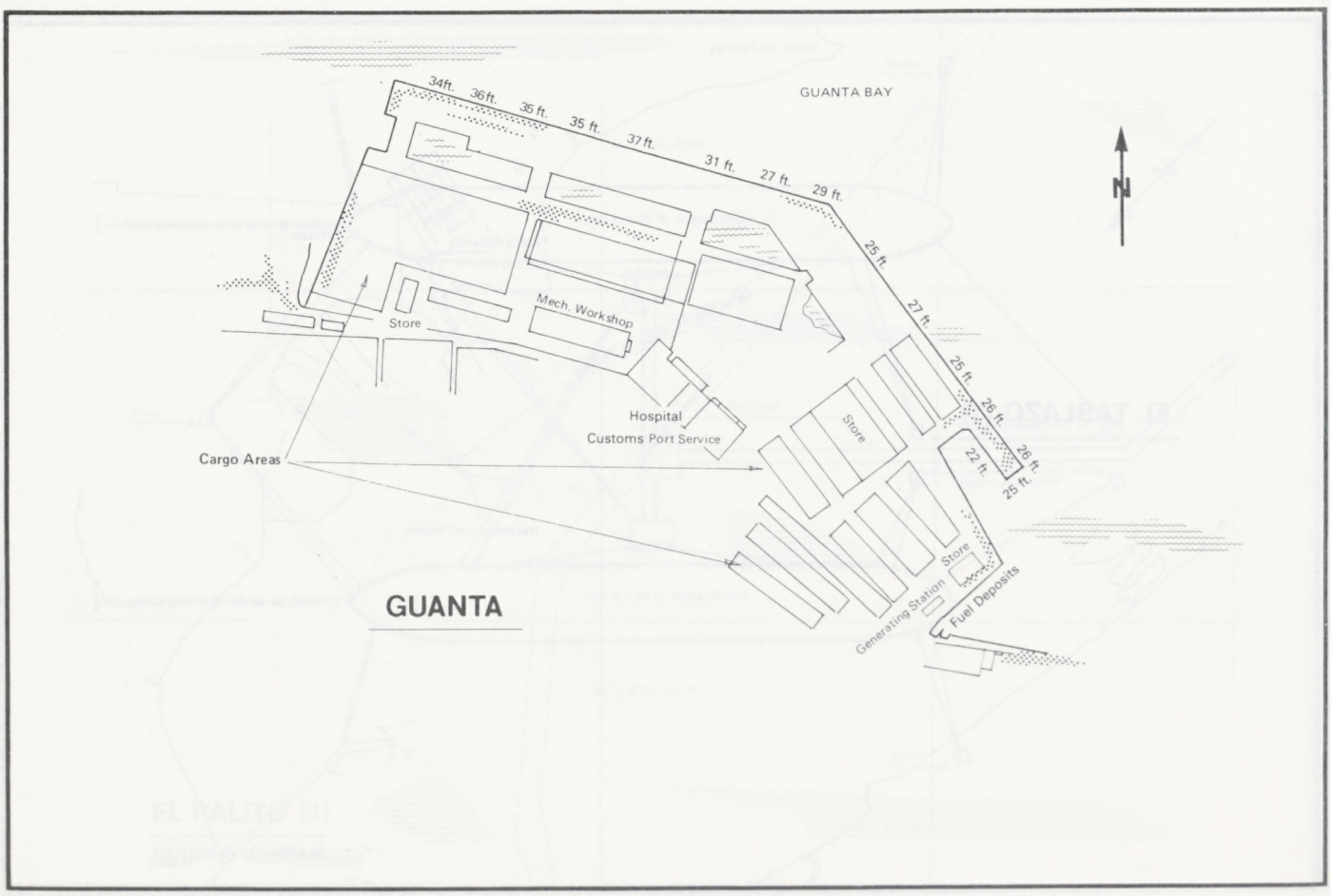
MOORING DIAGRAM

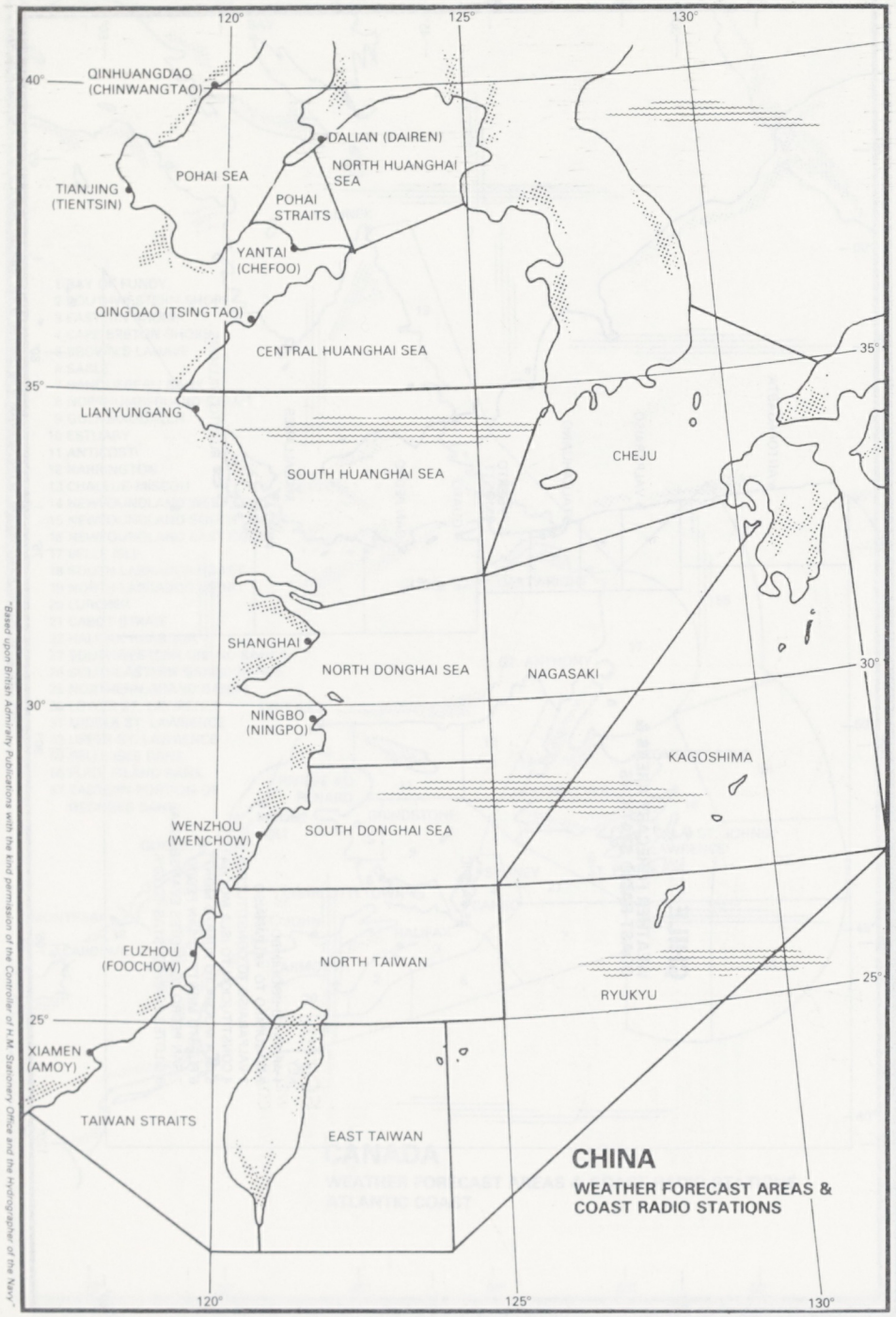

EL PALITO (2)
APPROACH & ANCHORAGE DIAGRAM
Identified by orange triangular range markers and blinking amber lights
Approaching Line
Two marker buoys with blinking white lights identifying a coral reef are located in this area
Buoy
Buoy
Buoy
Walkway
East Shore Range Green
West Shore Range Red
South Shore Range Red


EL TABLAZO (1)
Punta de Palmas
Puerto Miranda
El Tablazo
Canal Pto. Miranda-El Tablazo
Navigation Channel
Recommended Access
Submarine Pipeline
Texaco



"Plan supplied by Ship's Master"





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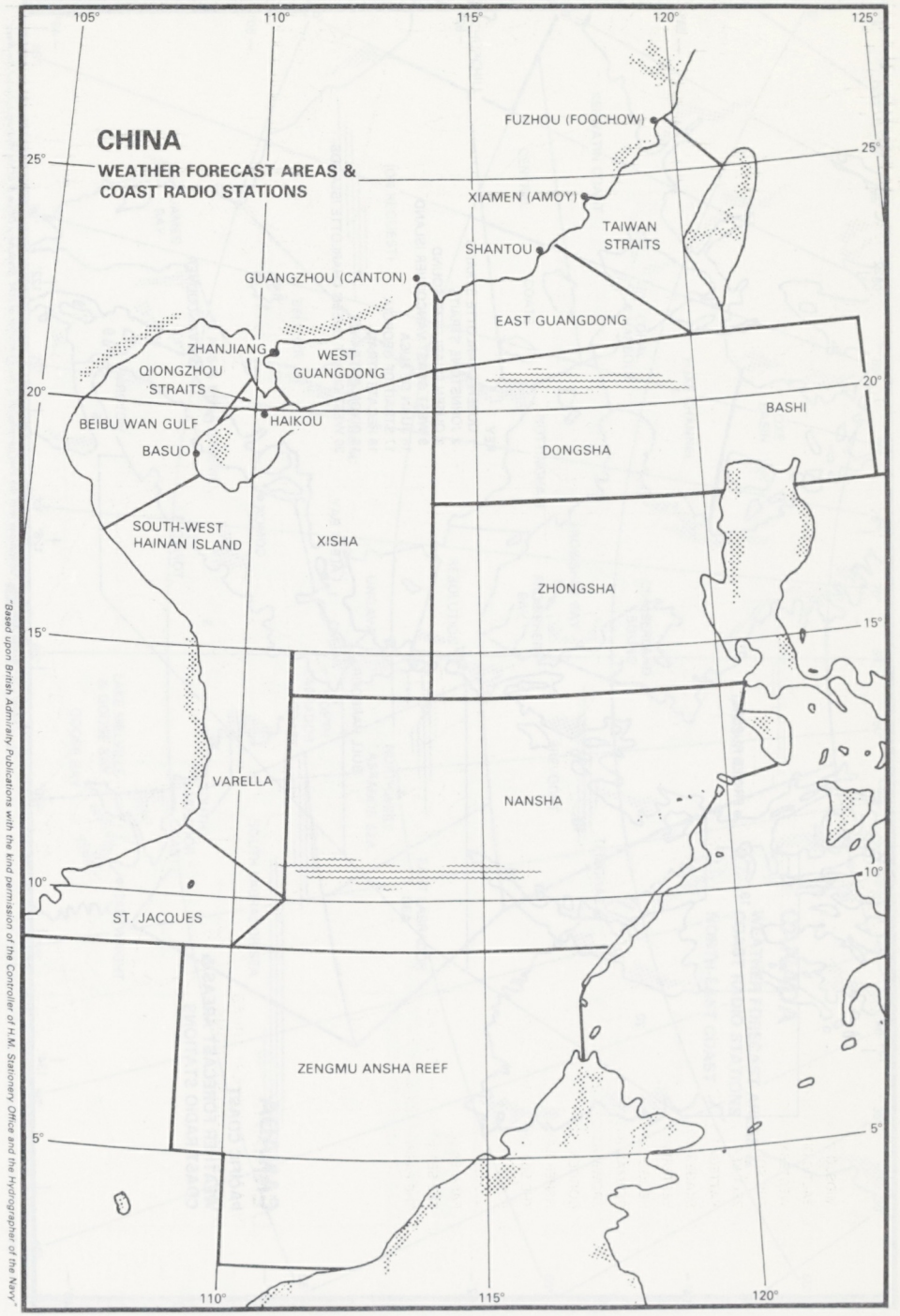

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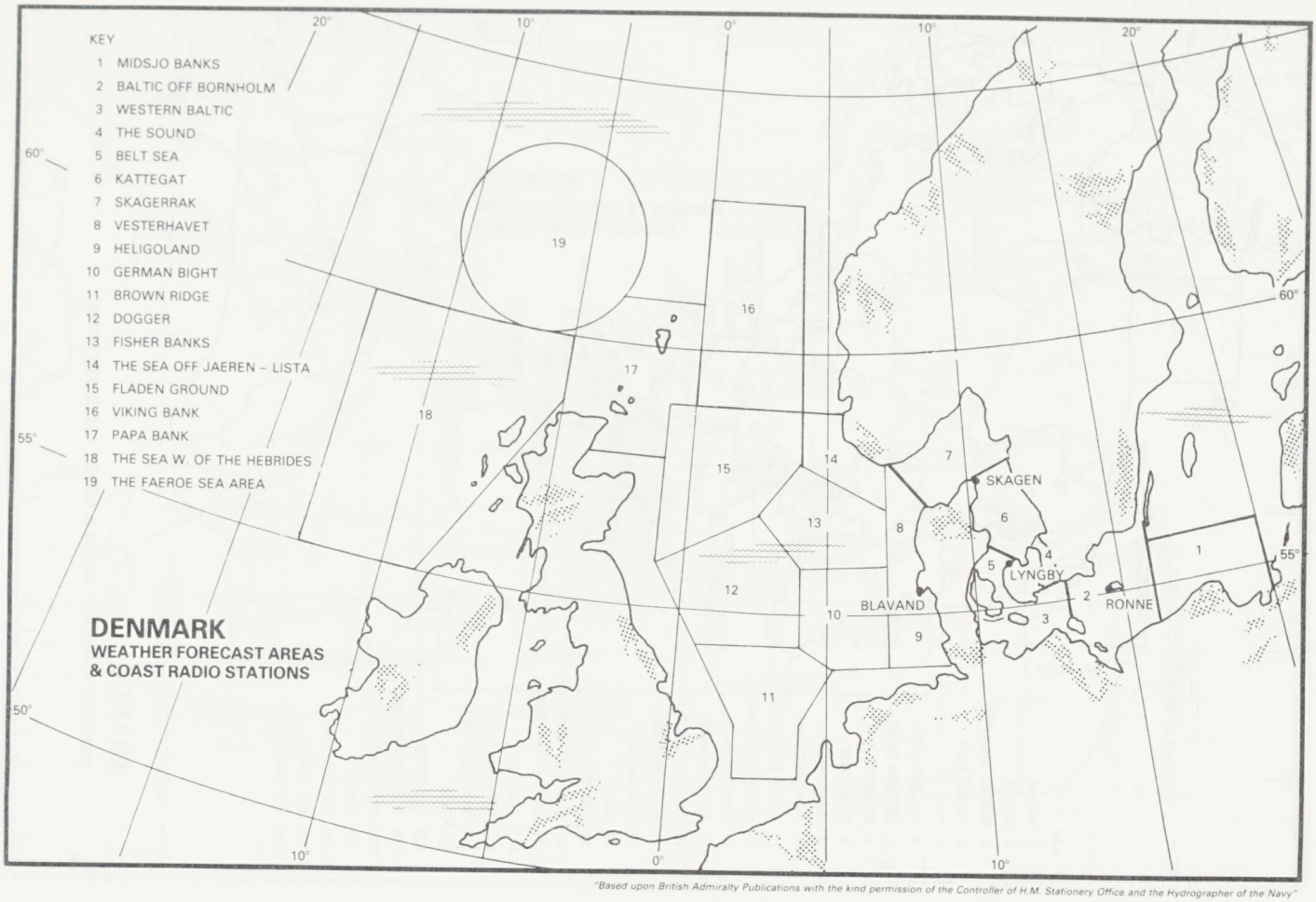

DENMARK
WEATHER FORECAST AREAS & COAST RADIO STATIONS

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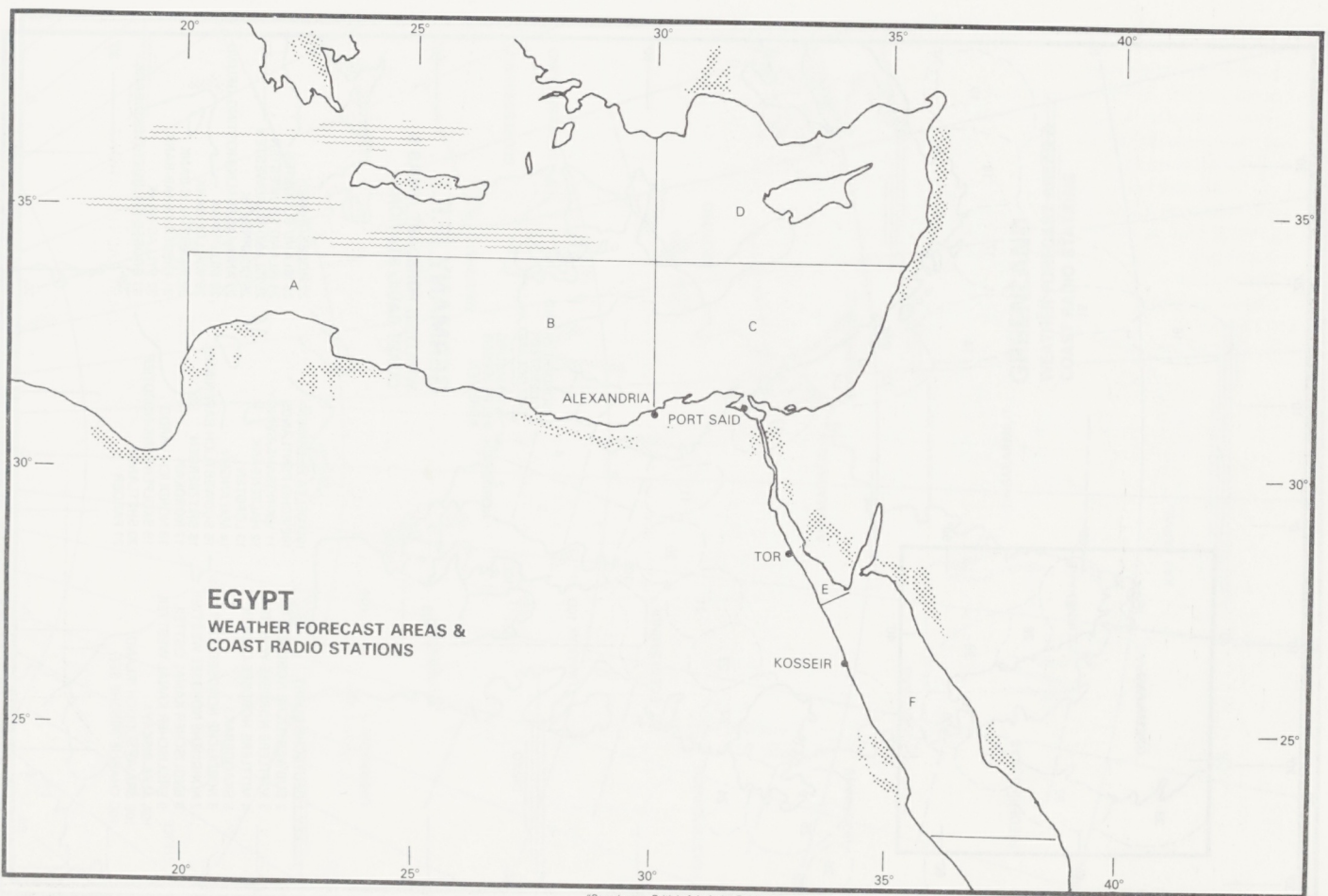

EGYPT
WEATHER FORECAST AREAS & COAST RADIO STATIONS

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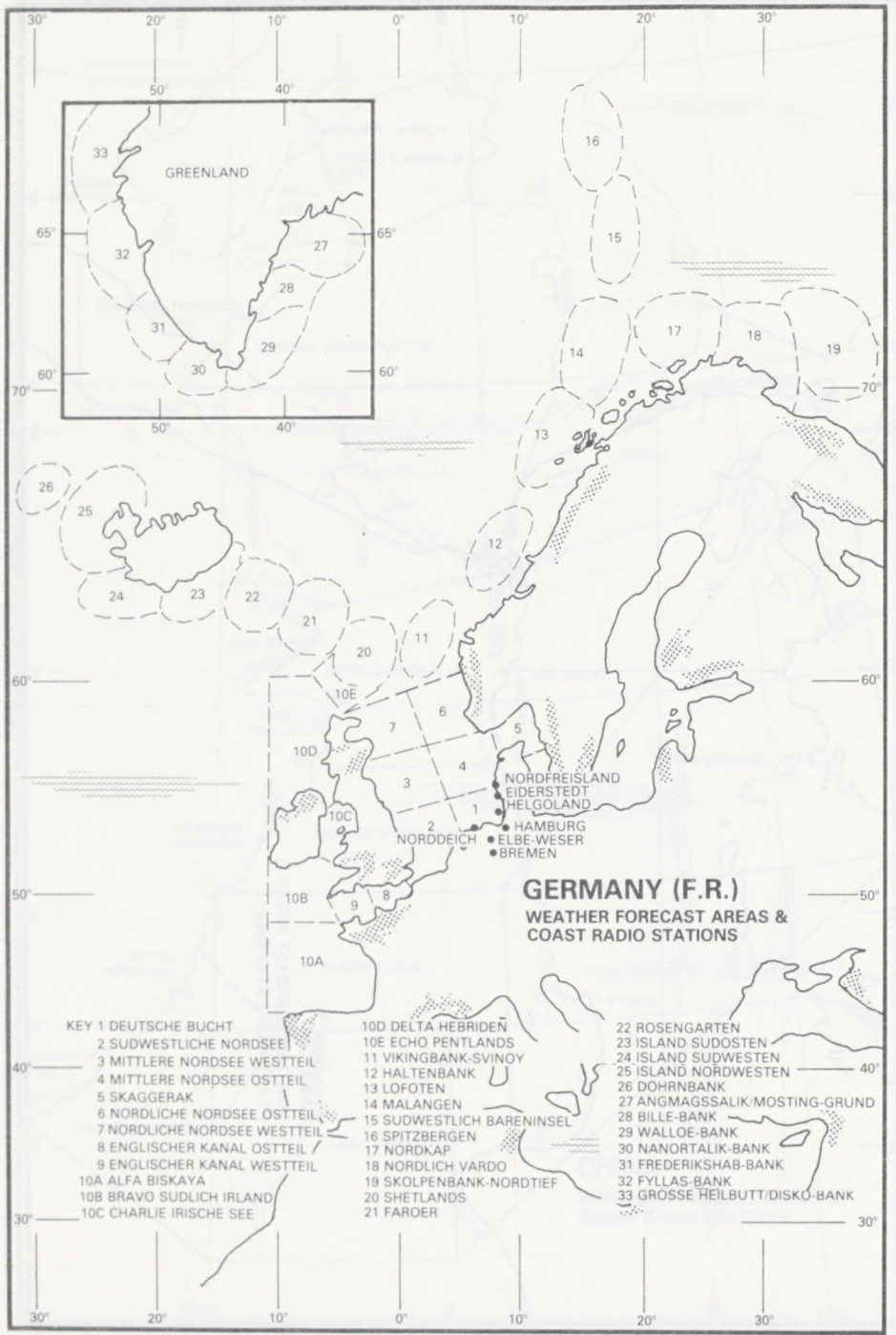

GERMANY (F.R.)

WEATHER FORECAST AREAS & COAST RADIO STATIONS

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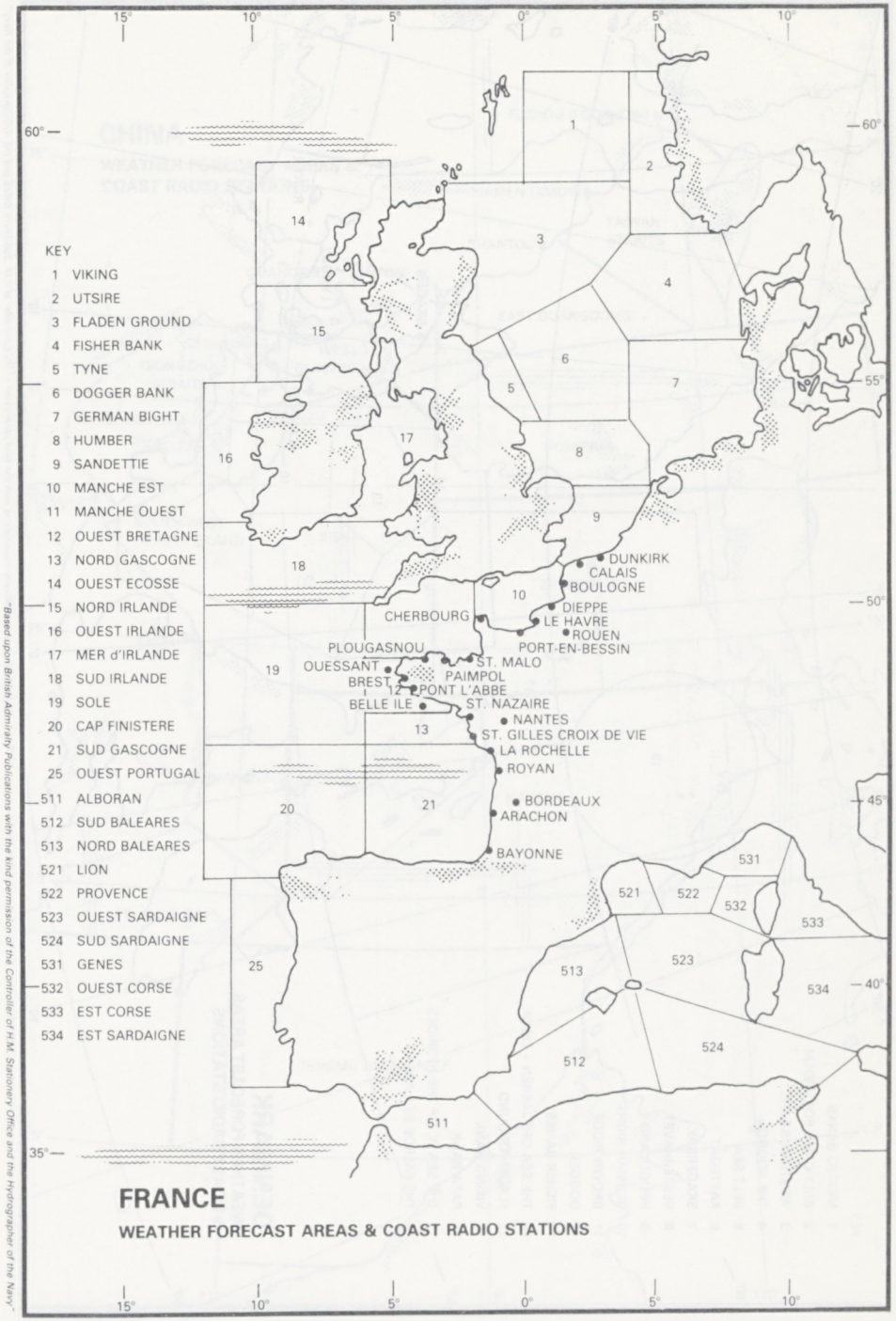

FRANCE

WEATHER FORECAST AREAS & COAST RADIO STATIONS

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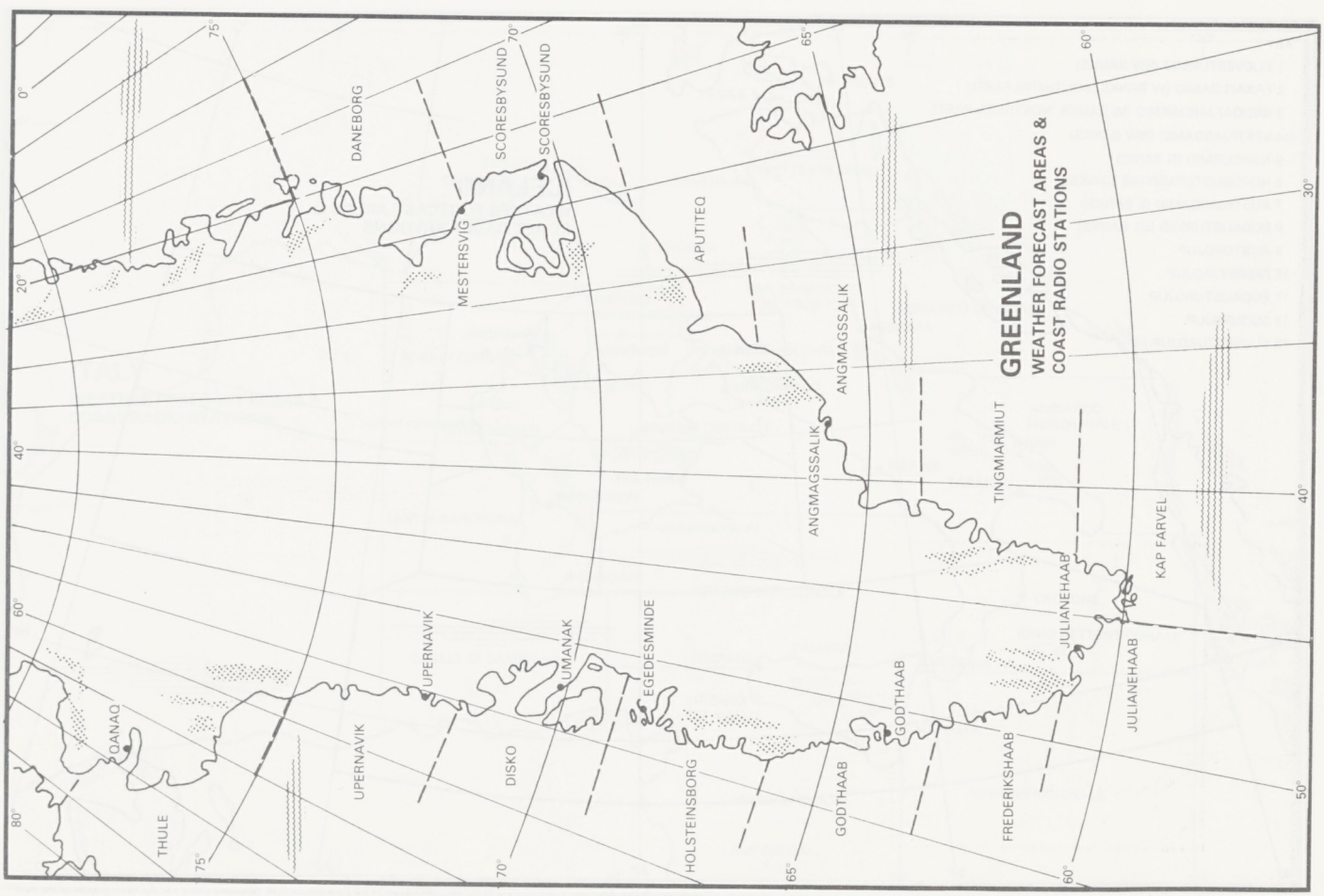

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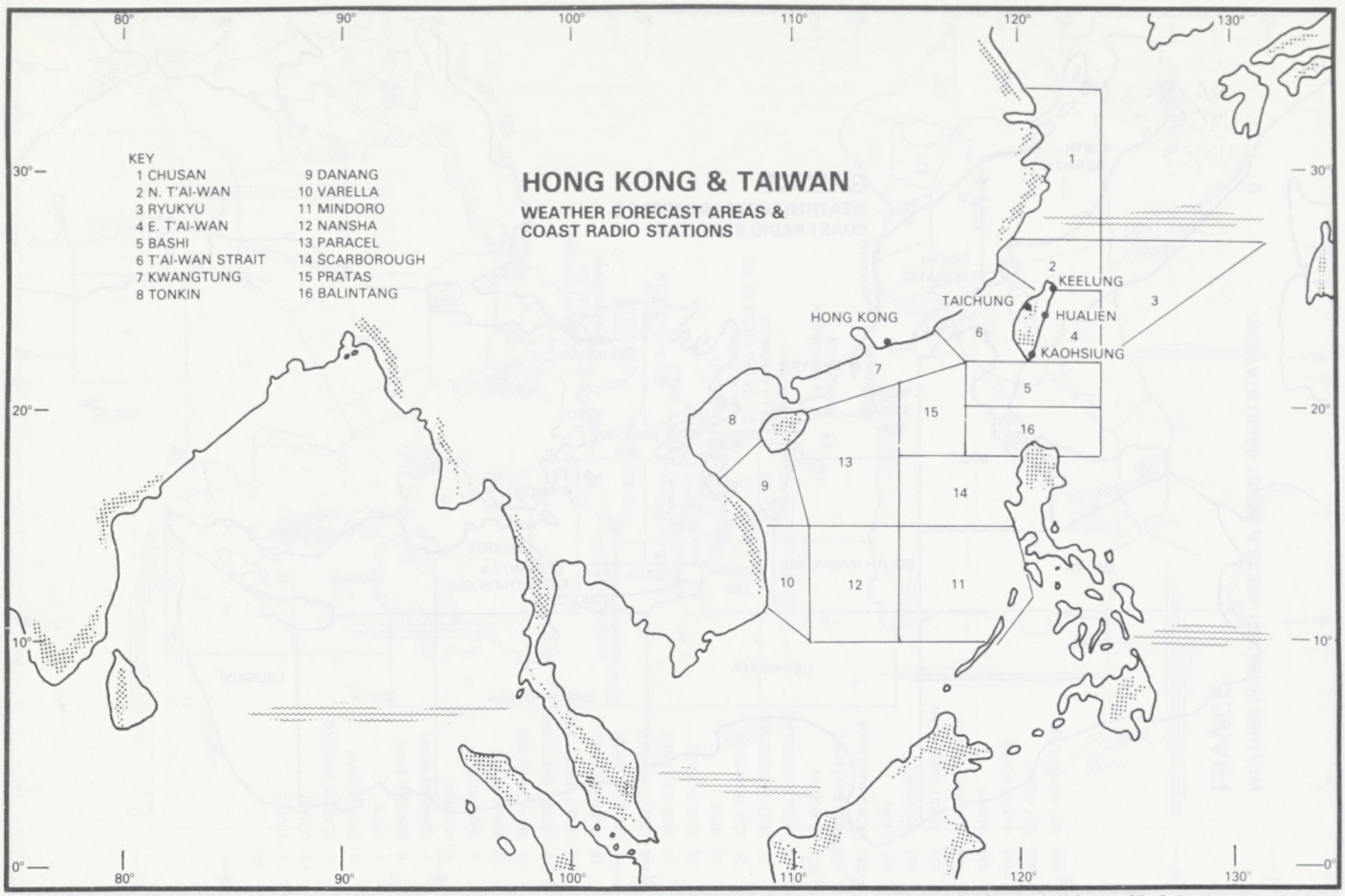

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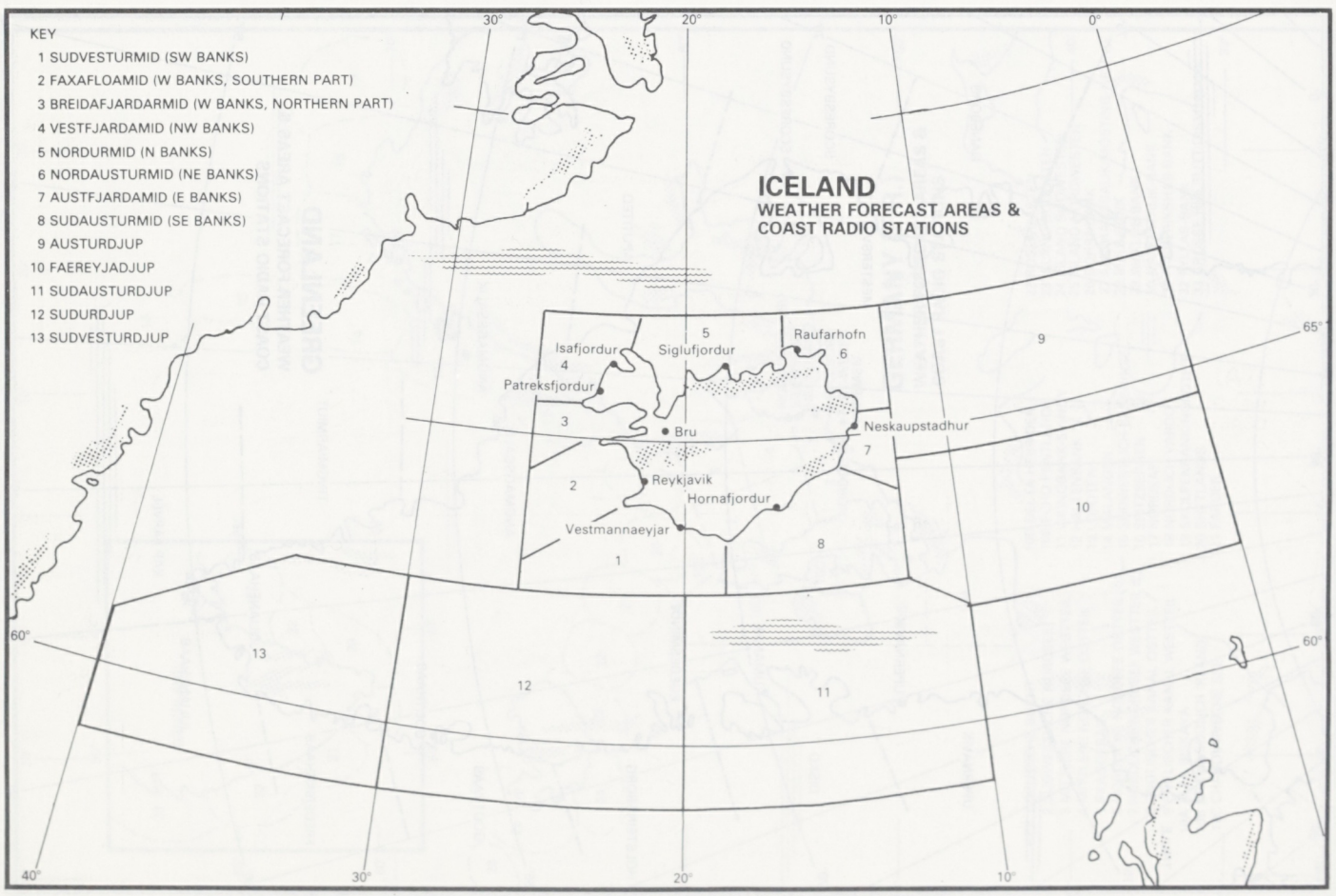

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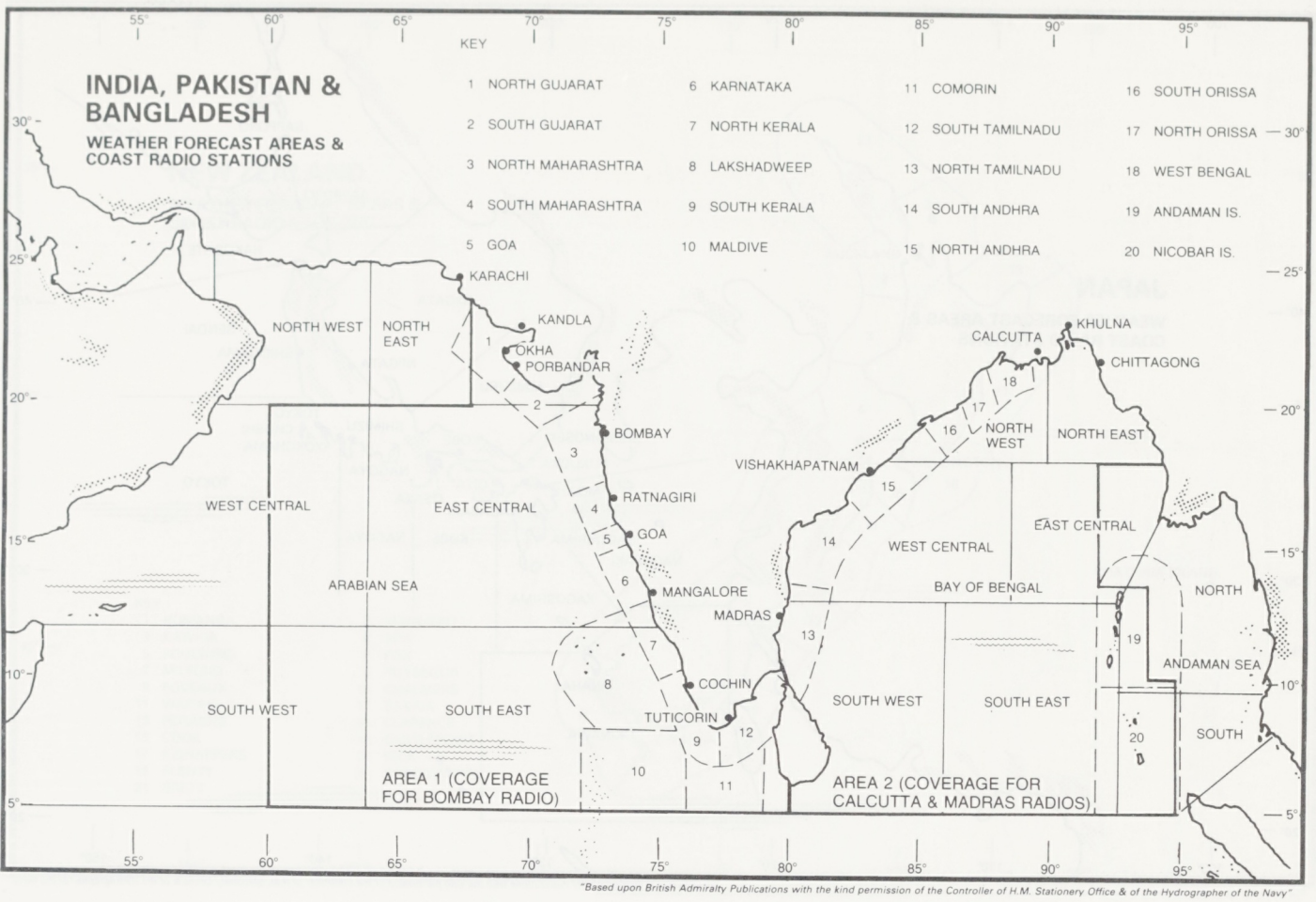

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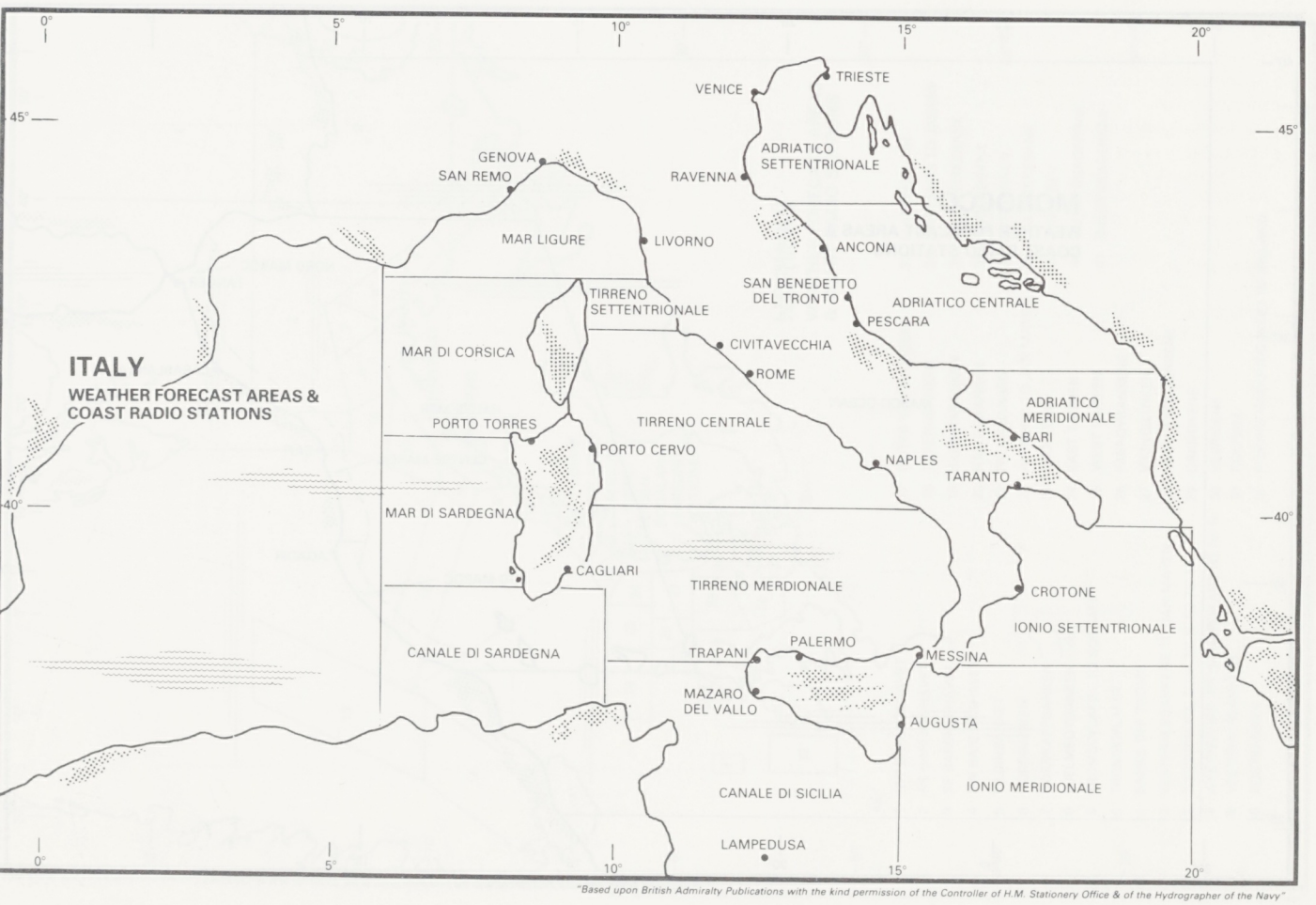

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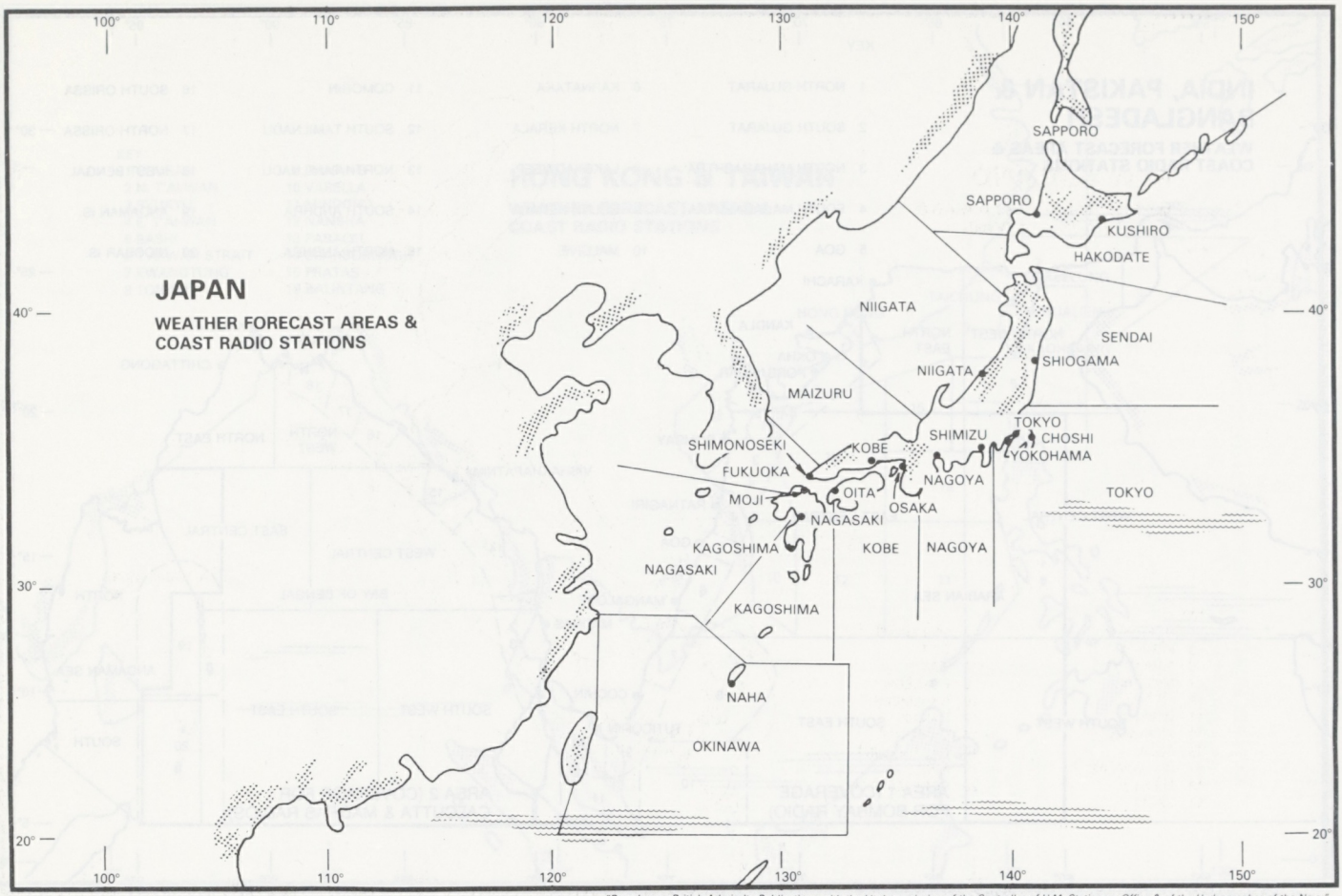

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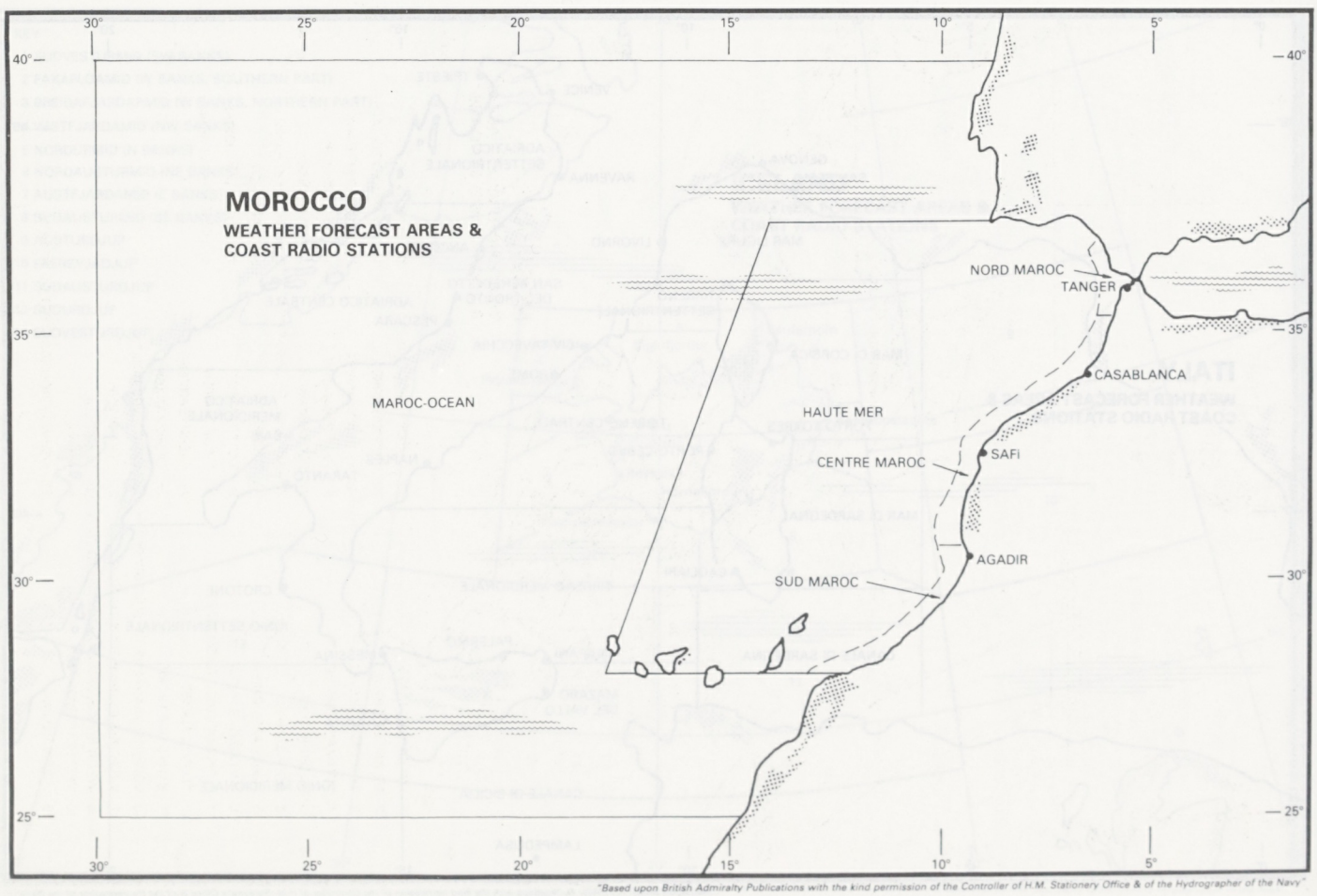

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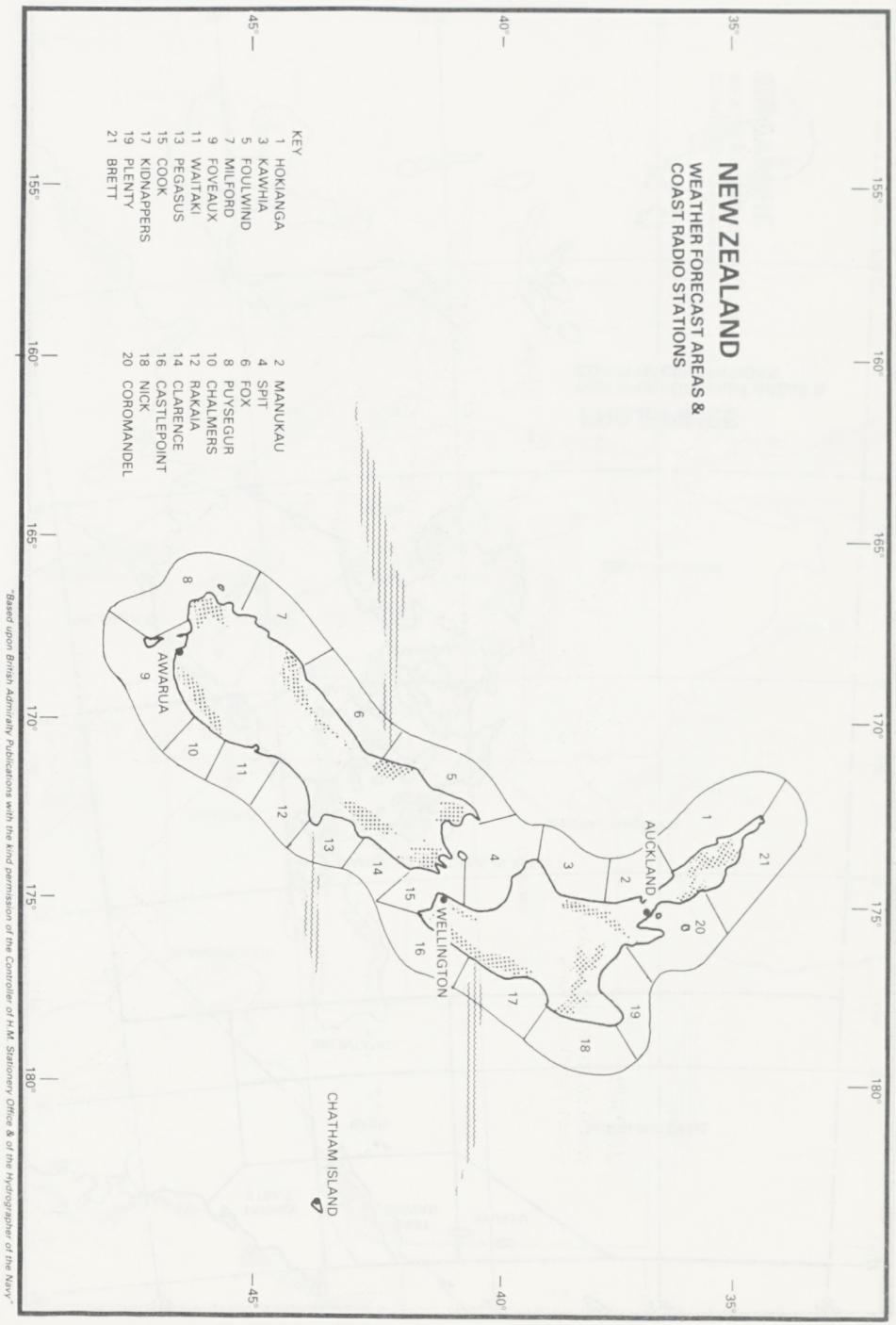

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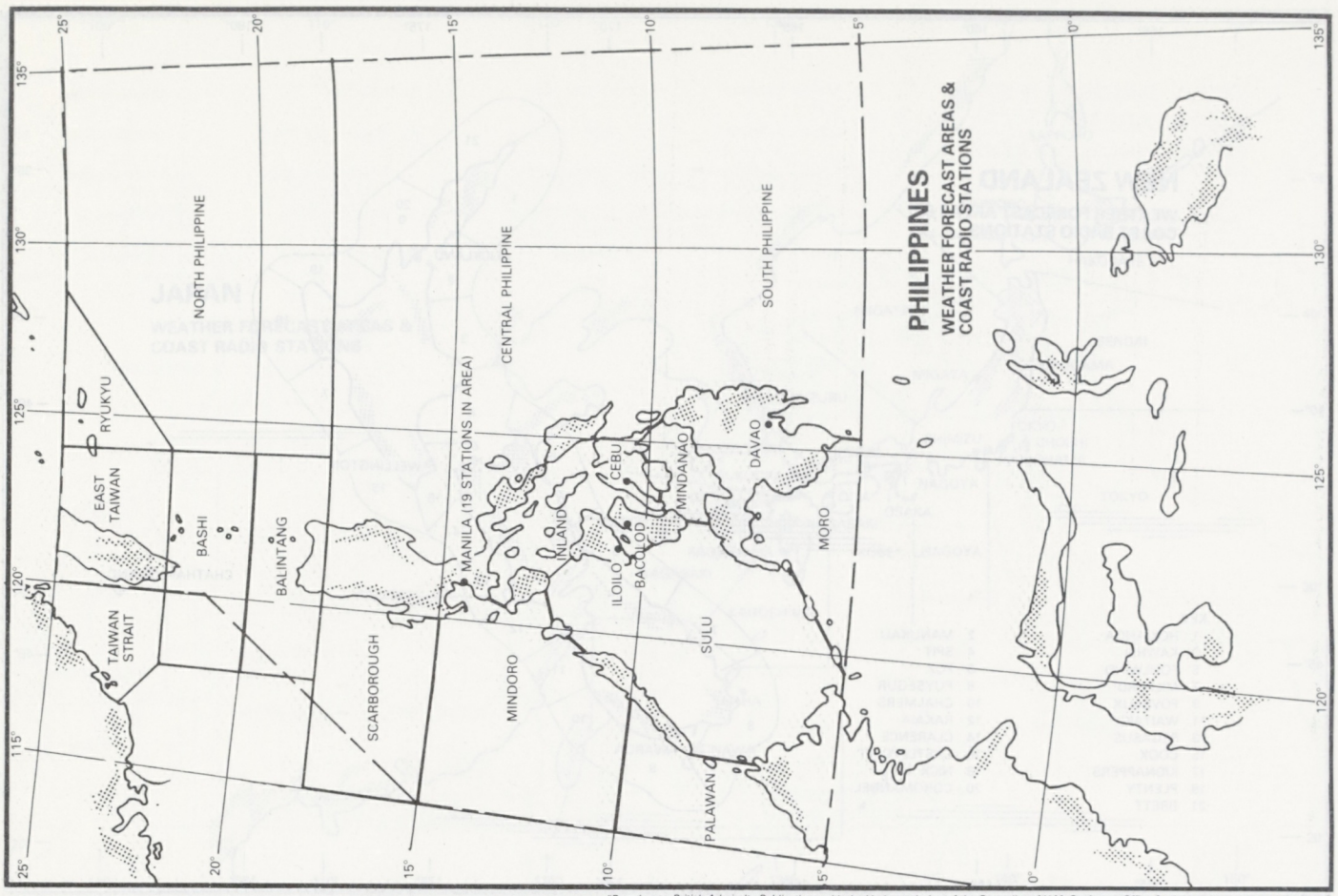

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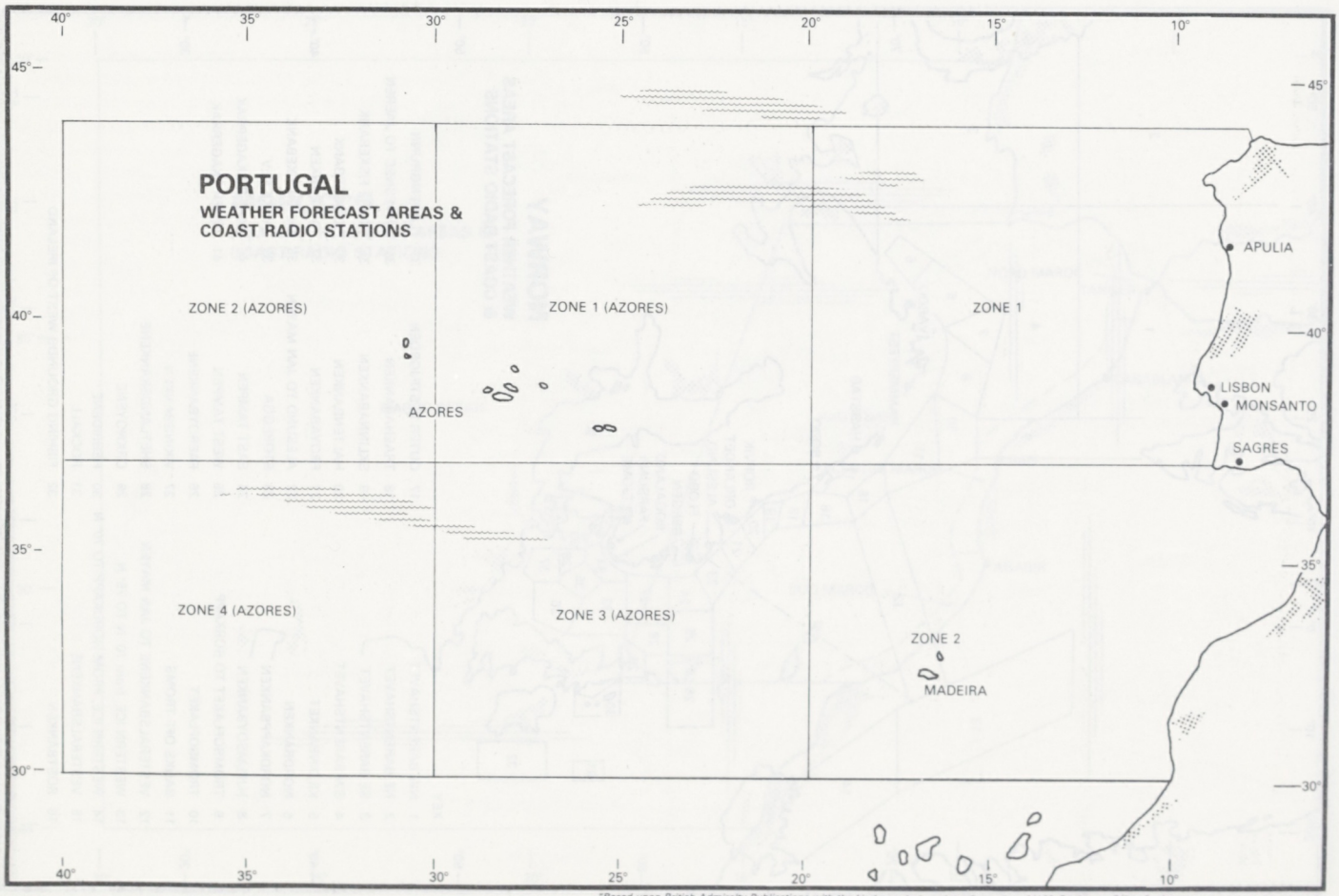

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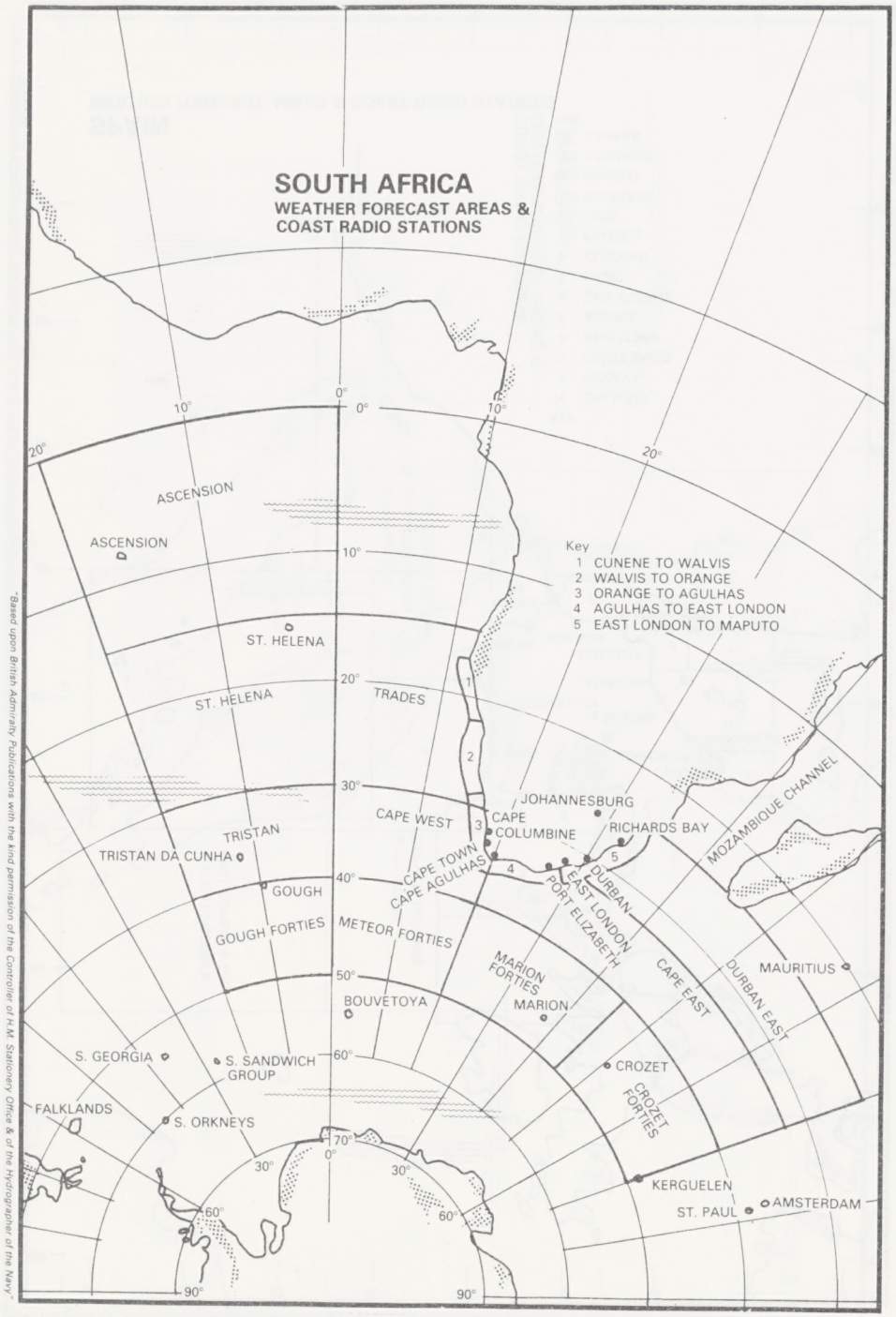

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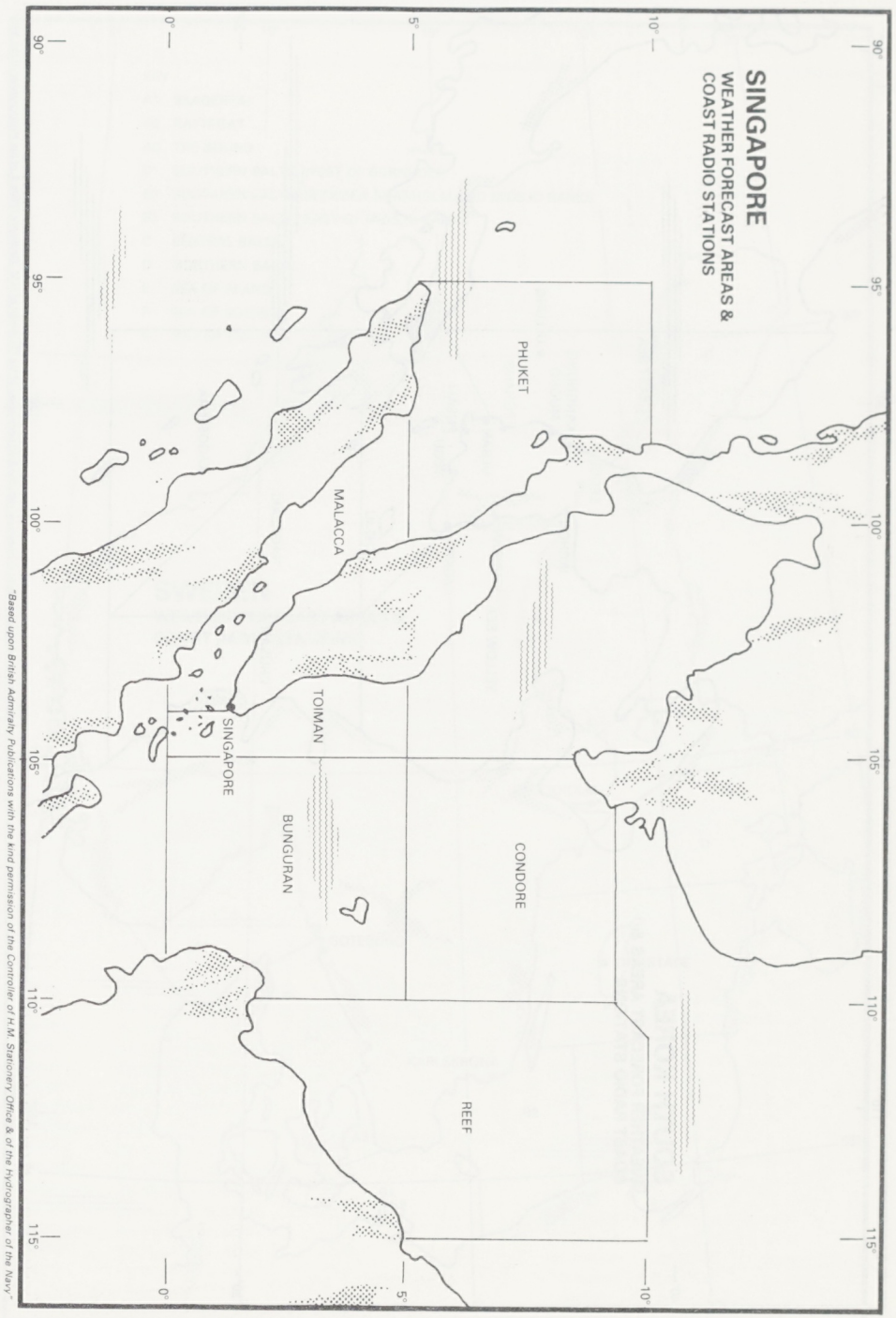

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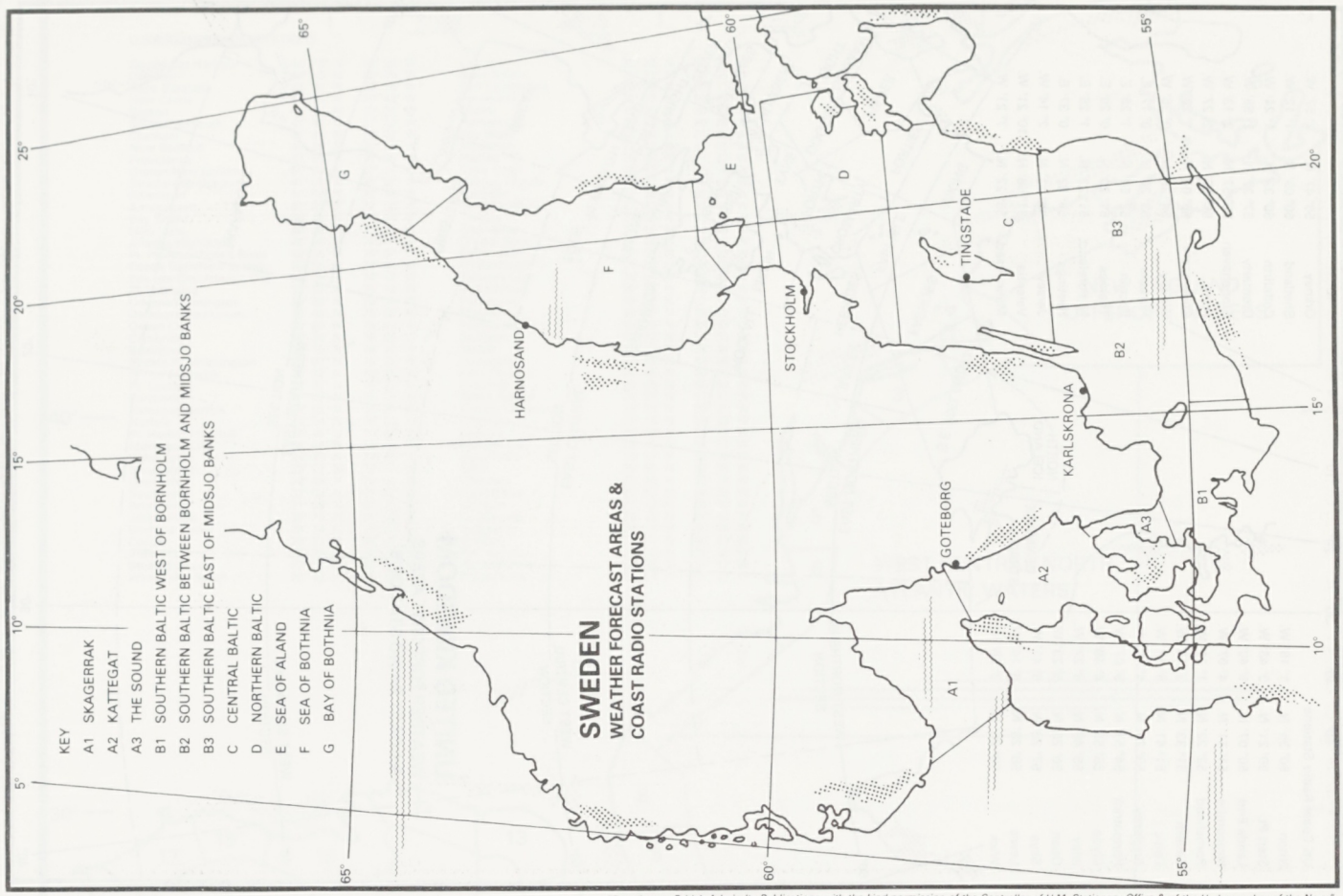

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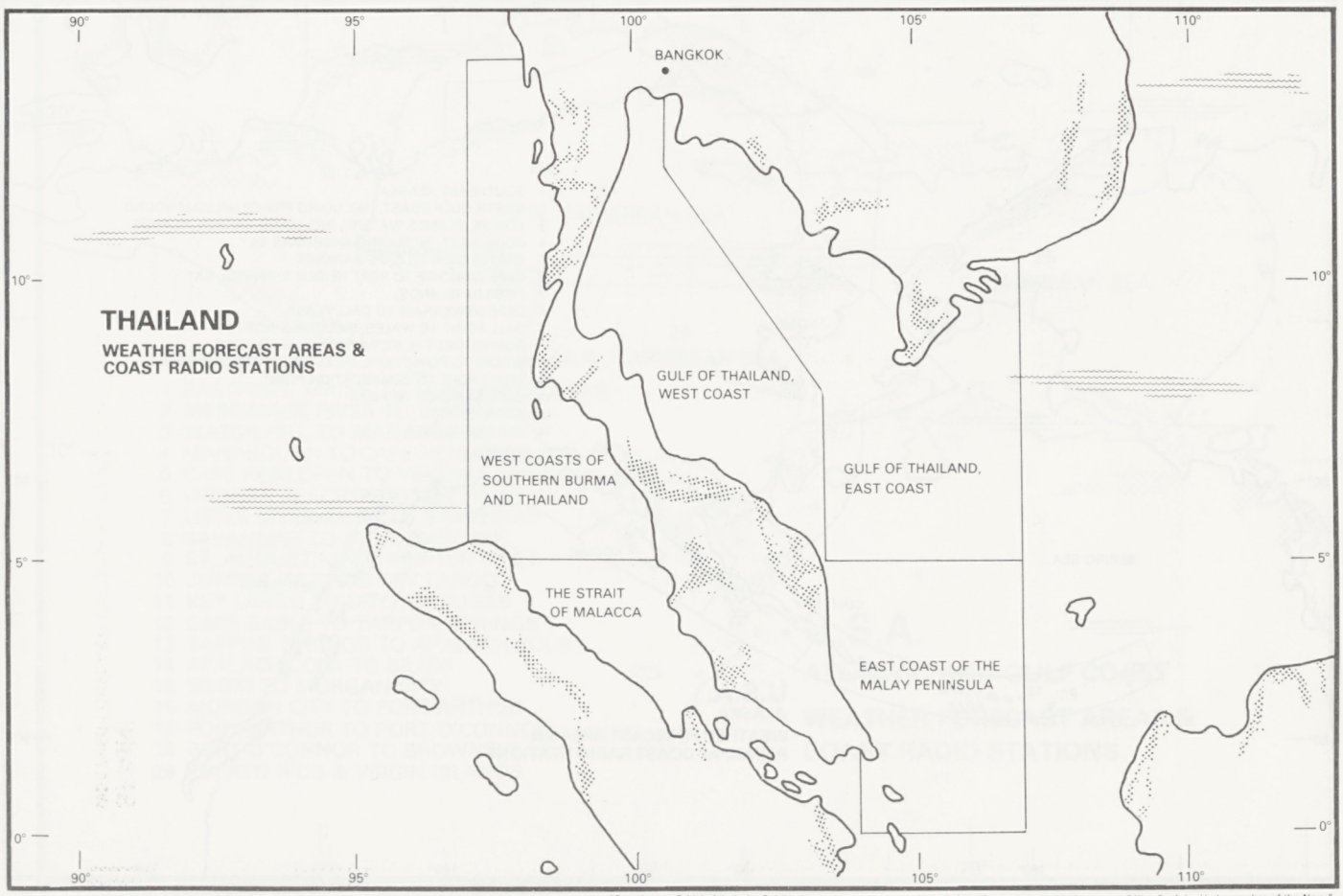

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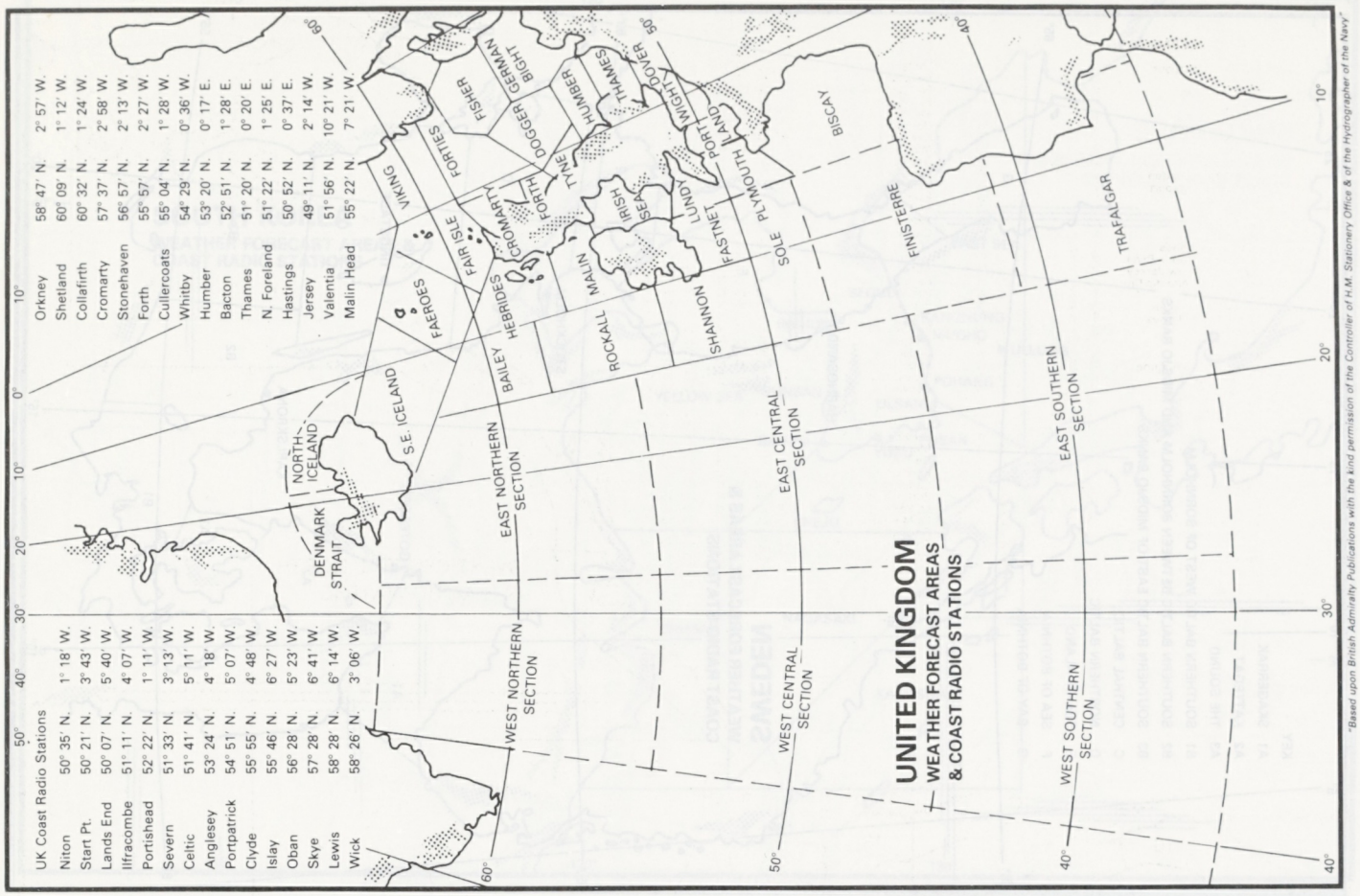

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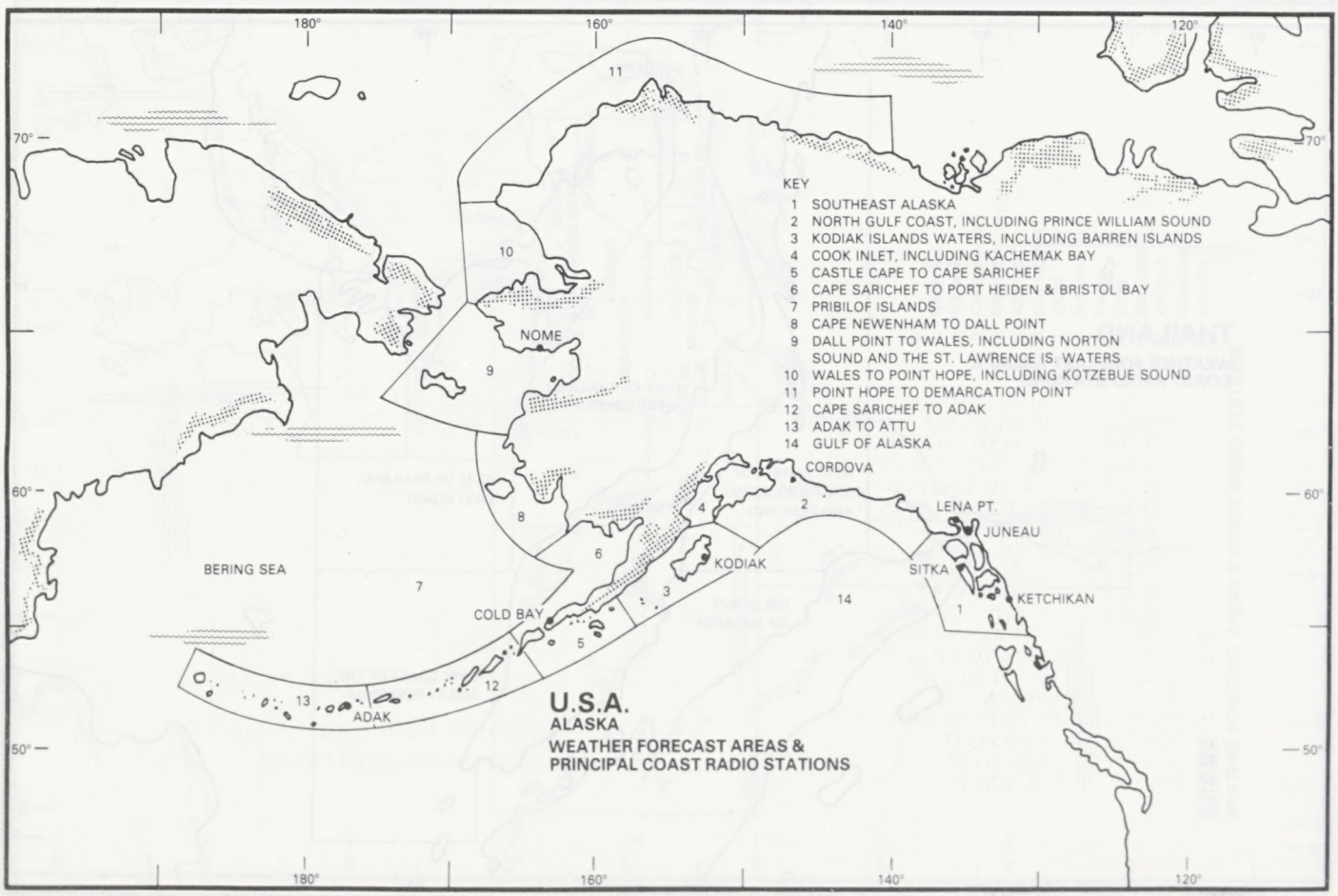

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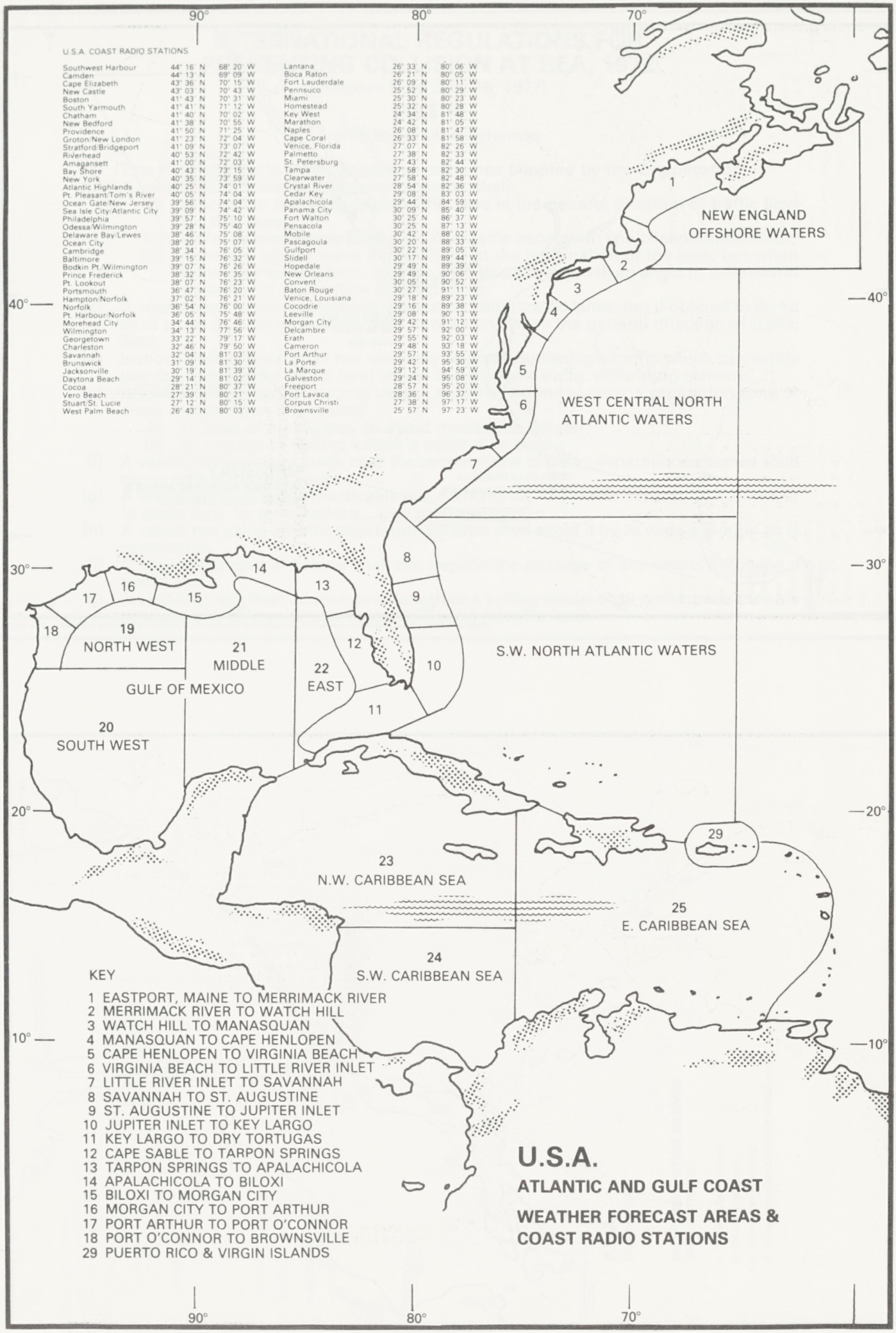

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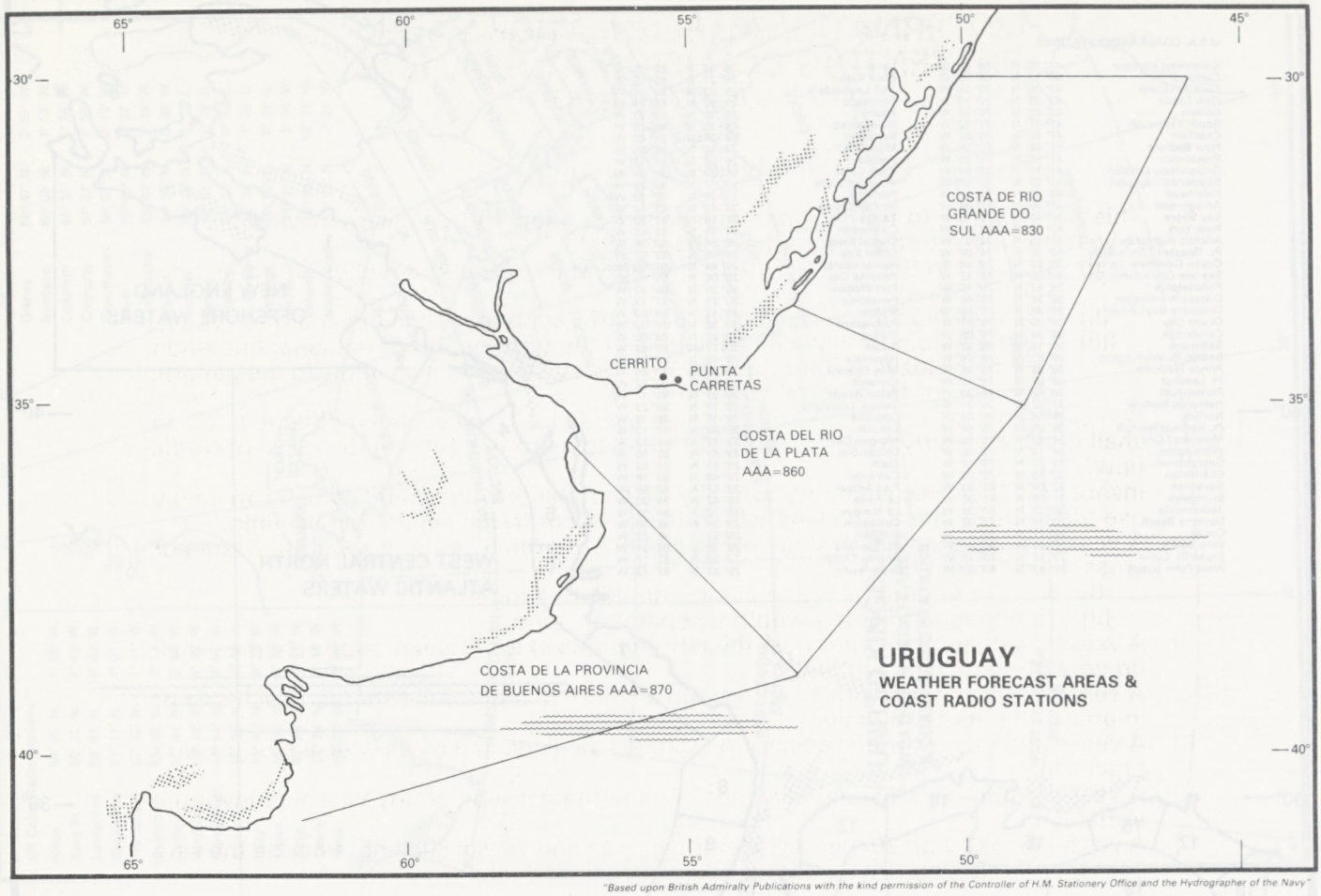

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INTERNATIONAL REGULATIONS FOR PREVENTING COLLISION AT SEA, 1972

(effective from July 15, 1977)

RULE 10

Traffic Separation Schemes

(a) This Rule applies to traffic separation schemes adopted by the Organisation.

(b) A vessel using a traffic separation scheme shall:
  (i) proceed in the appropriate traffic lane in the general direction of traffic flow for that lane;
  (ii) so far as practicable keep clear of a traffic separation line or separation zone;
  (iii) normally join or leave a traffic lane at the termination of the lane, but when joining or leaving from the side shall do so at as small an angle to the general direction of traffic flow as practicable.

(c) A vessel shall so far as practicable avoid crossing traffic lanes, but if obliged to do so shall cross as nearly as practicable at right angles to the general direction of traffic flow.

(d) Inshore traffic zones shall not normally be used by through traffic which can safely use the appropriate traffic lane within the adjacent traffic separation scheme.

(e) A vessel, other than a crossing vessel, shall not normally enter a separation zone or cross a separation line except:
  (i) in case of emergency to avoid immediate danger;
  (ii) to engage in fishing within a separation zone.

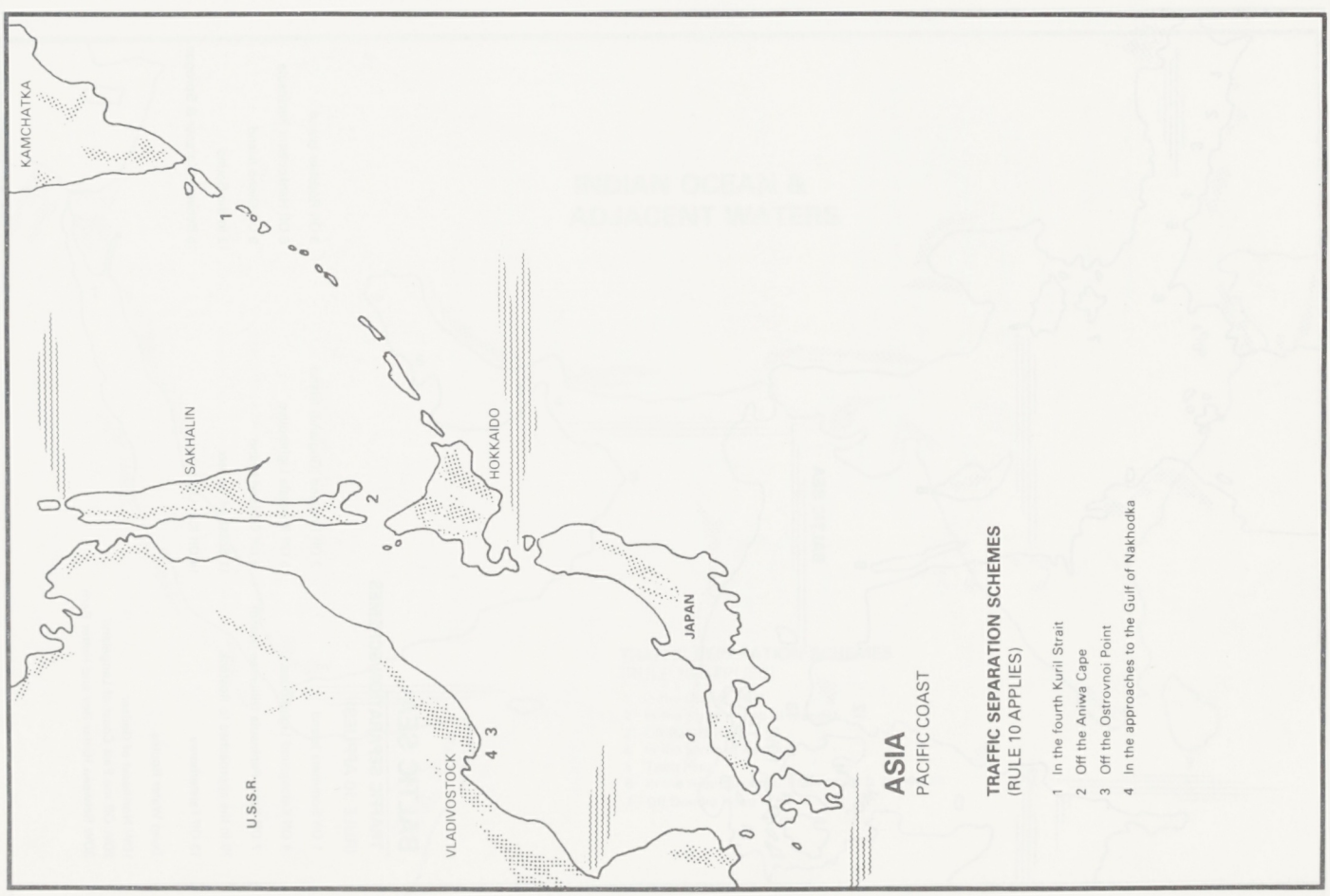
(f) A vessel navigating in areas near the terminations of traffic separation schemes shall do so with particular caution.

(g) A vessel shall so far as practicable avoid anchoring in a traffic separation scheme or in areas near its terminations.

(h) A vessel not using a traffic separation scheme shall avoid it by as wide a margin as is practicable.

(i) A vessel engaged in fishing shall not impede the passage of any vessel following a traffic lane.

(j) A vessel of less than 20 metres in length or a sailing vessel shall not impede the safe passage of a power-driven vessel following a traffic lane.



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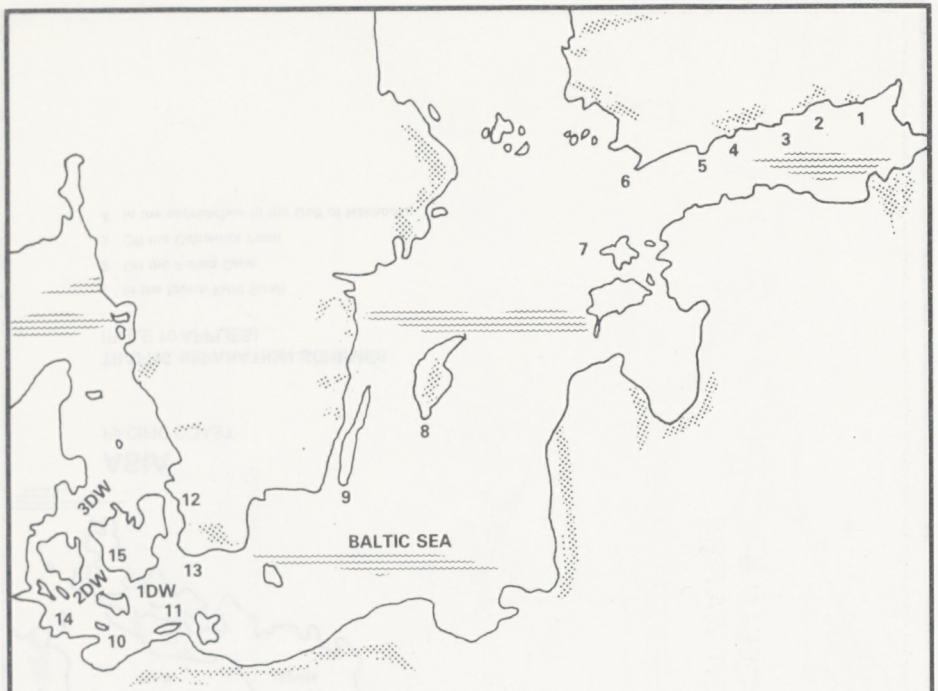


BALTIC SEA

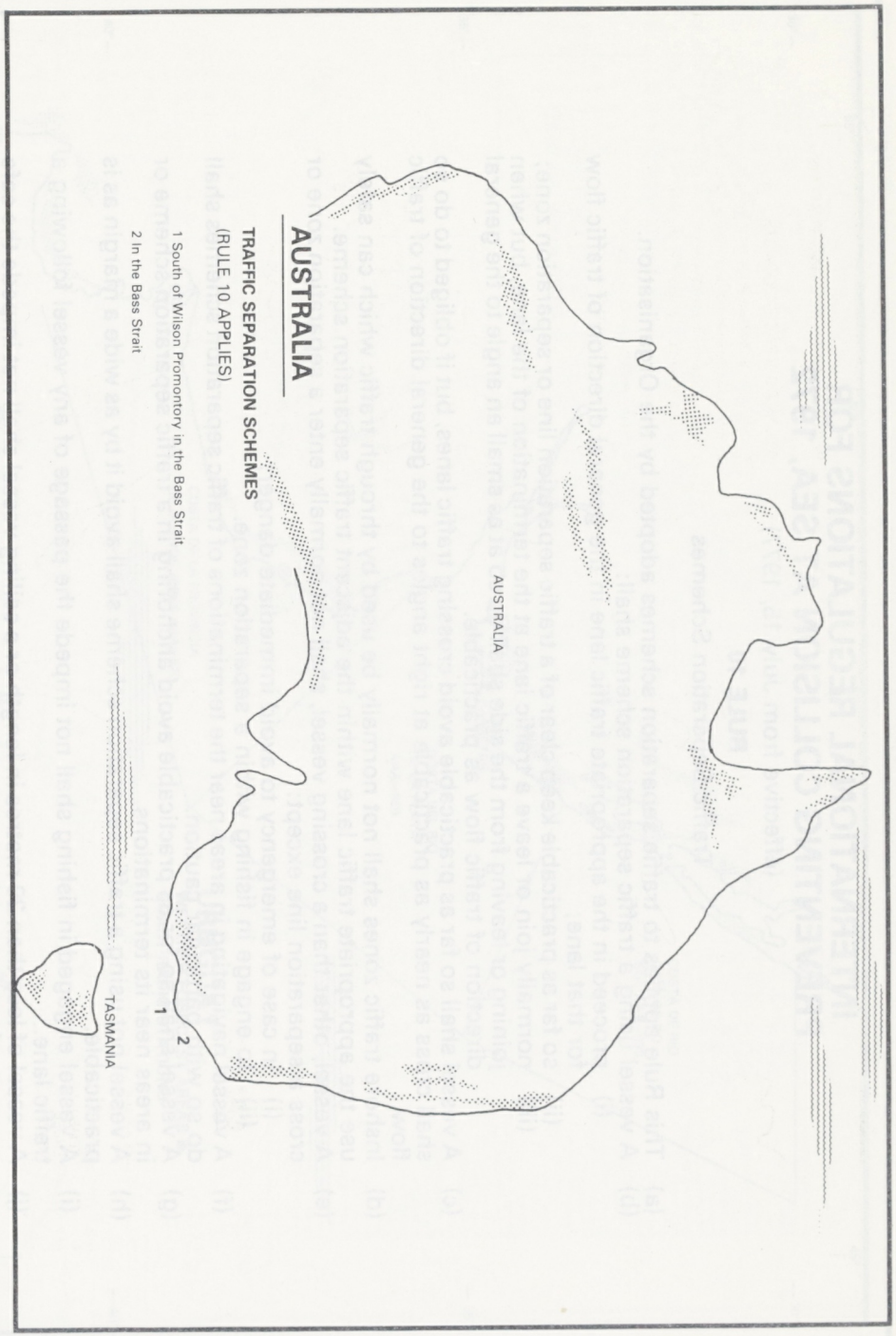
TRAFFIC SEPARATION SCHEMES

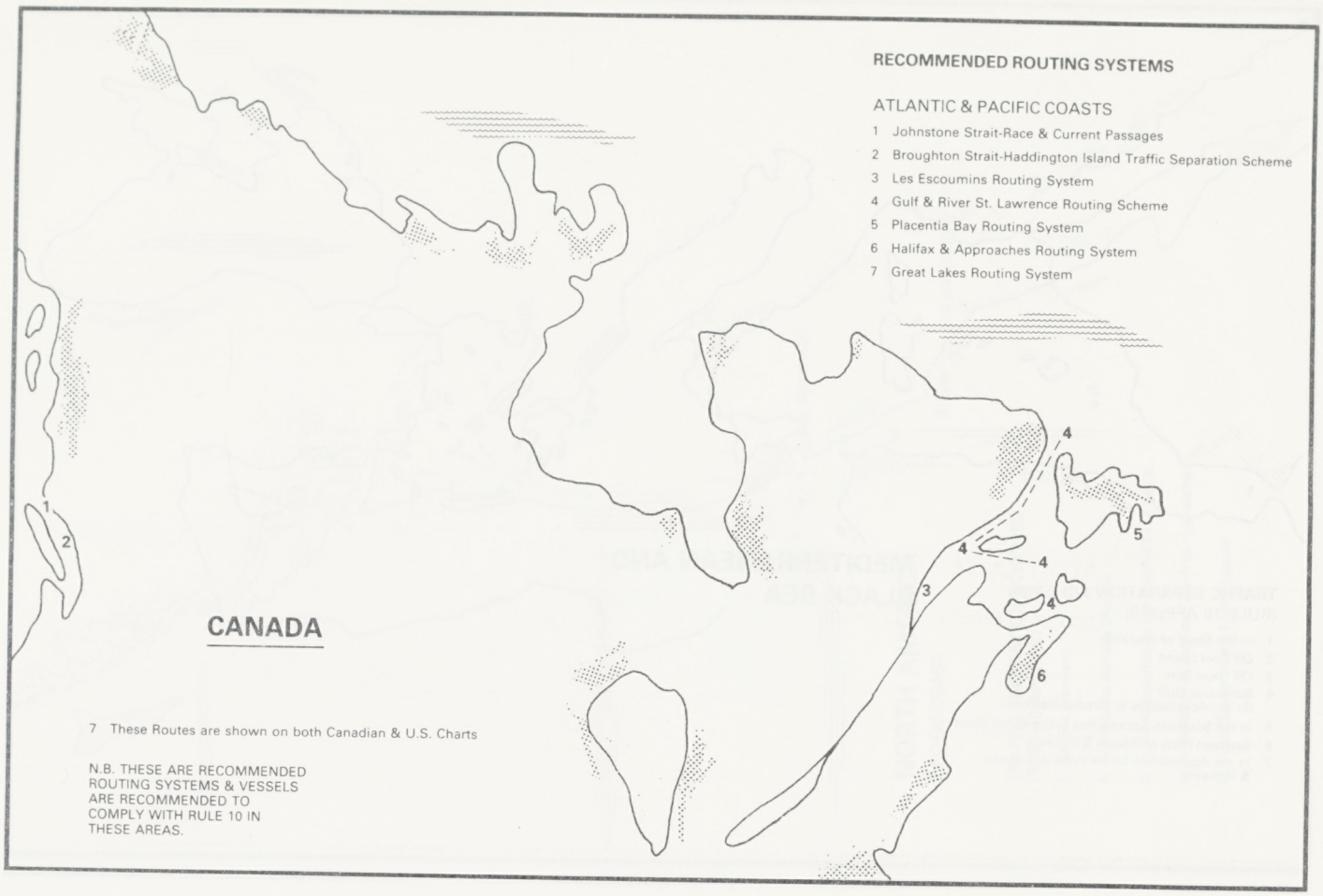
(RULE 10 APPLIES)

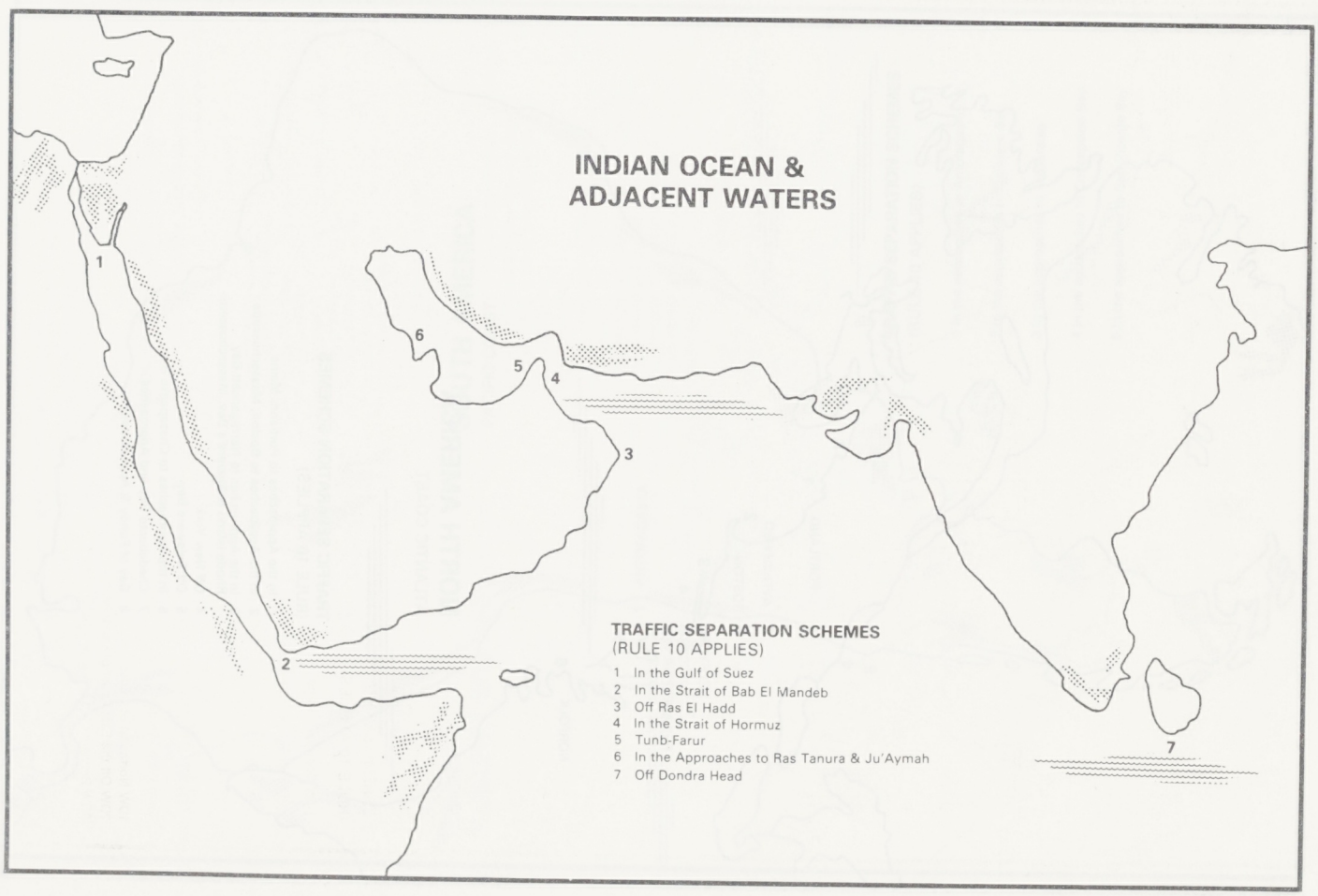
1 Off Sommers Island
2 Off Hogland (Gogland) Island
3 Off Rodsher Island
4 Off Kalbagrund Lighthouse
5 Off Porkkala Lighthouse
6 Off Hankoniemi Peninsula
7 Off Kopu Peninsula (Hiiumaa Island)
8 Off Gotland Island
9 Off Oland Island
10 In the approaches to Rostock
11 South of Gedser
12 In the Sound
13 Off Falsterborev
14 Off Kiel Lighthouse
15 Between Korsoer & Sprogoe

Deep Water Routes

1DW Northeast of Gedser
2DW Off the East Coast of Langeland
3DW Between Hatter Rev and Hatter Barn




RECOMMENDED ROUTING SYSTEMS
ATLANTIC & PACIFIC COASTS
1 Johnstone Strait-Race & Current Passages
2 Broughton Strait-Haddington Island Traffic Separation Scheme
3 Les Escoumins Routing System
4 Gulf & River St. Lawrence Routing Scheme
5 Placentia Bay Routing System
6 Halifax & Approaches Routing System
7 Great Lakes Routing System
CANADA
7 These Routes are shown on both Canadian & U.S. Charts
N.B. THESE ARE RECOMMENDED ROUTING SYSTEMS & VESSELS ARE RECOMMENDED TO COMPLY WITH RULE 10 IN THESE AREAS.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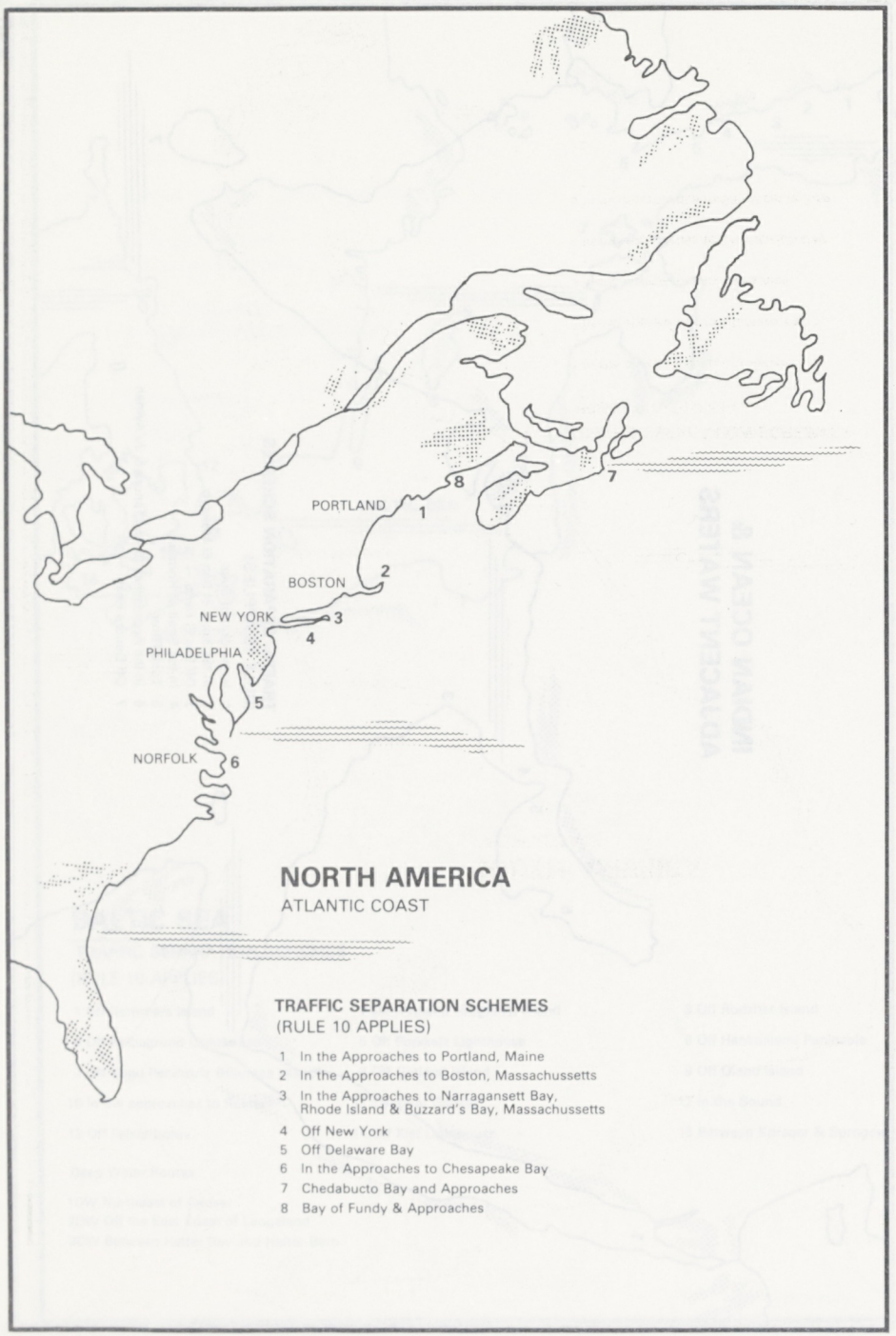
TRAFFIC SEPARATION SCHEMES
(RULE 10 APPLIES)
1 In the Gulf of Suez
2 In the Strait of Bab El Mandeb
3 Off Ras El Hadd
4 In the Strait of Hormuz
5 Tunb-Farur
6 In the Approaches to Ras Tanura & Ju'Aymah
7 Off Dondra Head

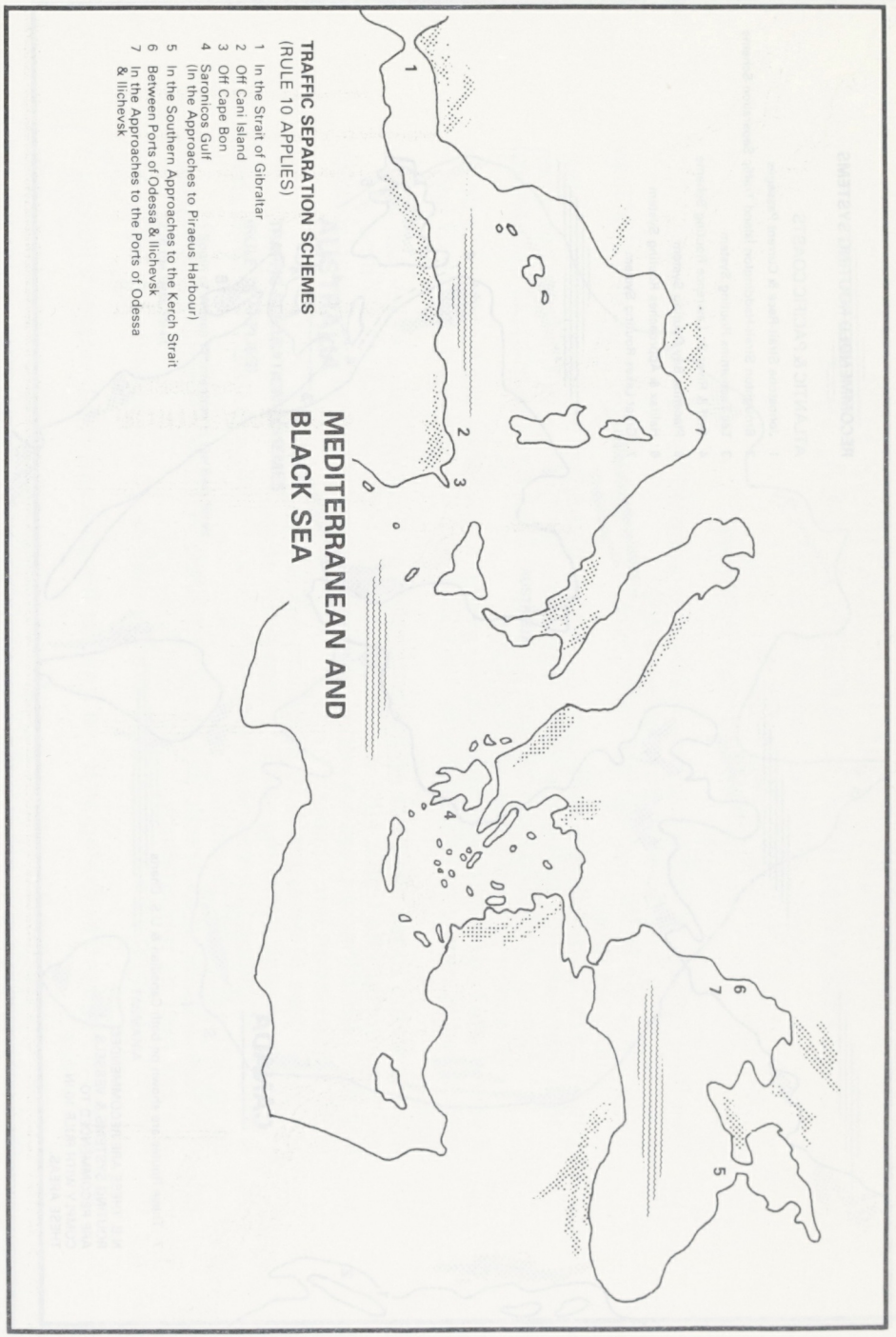
P1003



NORTH AMERICA
ATLANTIC COAST

TRAFFIC SEPARATION SCHEMES
(RULE 10 APPLIES)

1 In the Approaches to Portland, Maine
2 In the Approaches to Boston, Massachussetts
3 In the Approaches to Narragansett Bay, Rhode Island & Buzzard's Bay, Massachussetts
4 Off New York
5 Off Delaware Bay
6 In the Approaches to Chesapeake Bay
7 Chedabucto Bay and Approaches
8 Bay of Fundy & Approaches

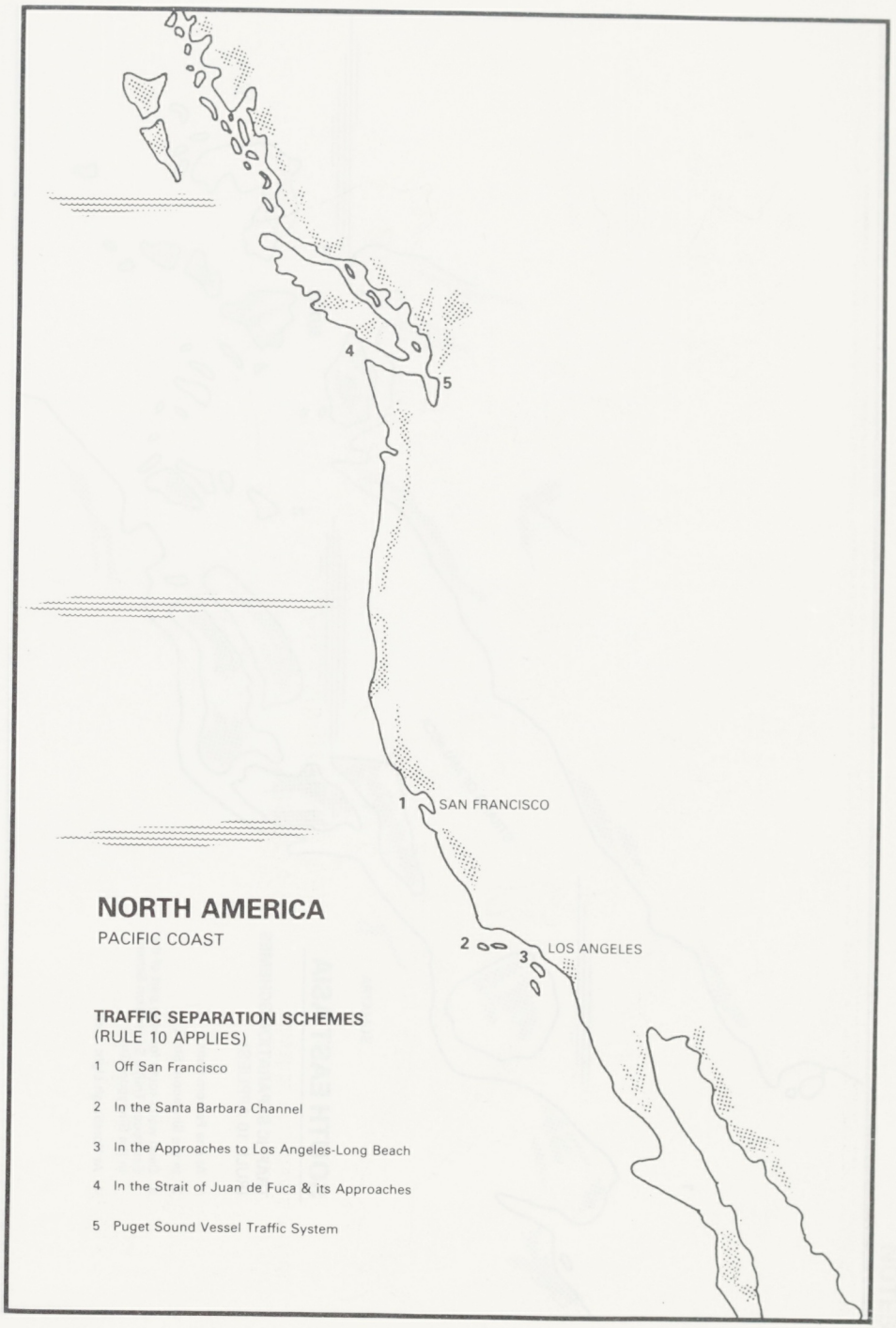


MEDITERRANEAN AND BLACK SEA

TRAFFIC SEPARATION SCHEMES
(RULE 10 APPLIES)

1 In the Strait of Gibraltar
2 Off Cani Island
3 Off Cape Bon
4 Saronicos Gulf (In the Approaches to Piraeus Harbour)
5 In the Southern Approaches to the Kerch Strait
6 Between Ports of Odessa & Ilichevsk
7 In the Approaches to the Ports of Odessa & Ilichevsk

SOUTH AMERICA
PACIFIC COAST
1 ANTOFAGASTA
2
3 VALPARAISO
4
5
TRAFFIC SEPARATION SCHEMES
(RULE 10 APPLIES)
1 In the approaches to Antofagasta
2 In the approaches to Quintero Bay
3 In the approaches to Valparaiso
4 In the approaches to Concepcion Bay
5 In the approaches to San Vicente Bay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5
1 SAN FRANCISCO
NORTH AMERICA
PACIFIC COAST
2
3 LOS ANGELES
TRAFFIC SEPARATION SCHEMES
(RULE 10 APPLIES)
1 Off San Francisco
2 In the Santa Barbara Channel
3 In the Approaches to Los Angeles-Long Beach
4 In the Strait of Juan de Fuca & its Approaches
5 Puget Sound Vessel Traffic System

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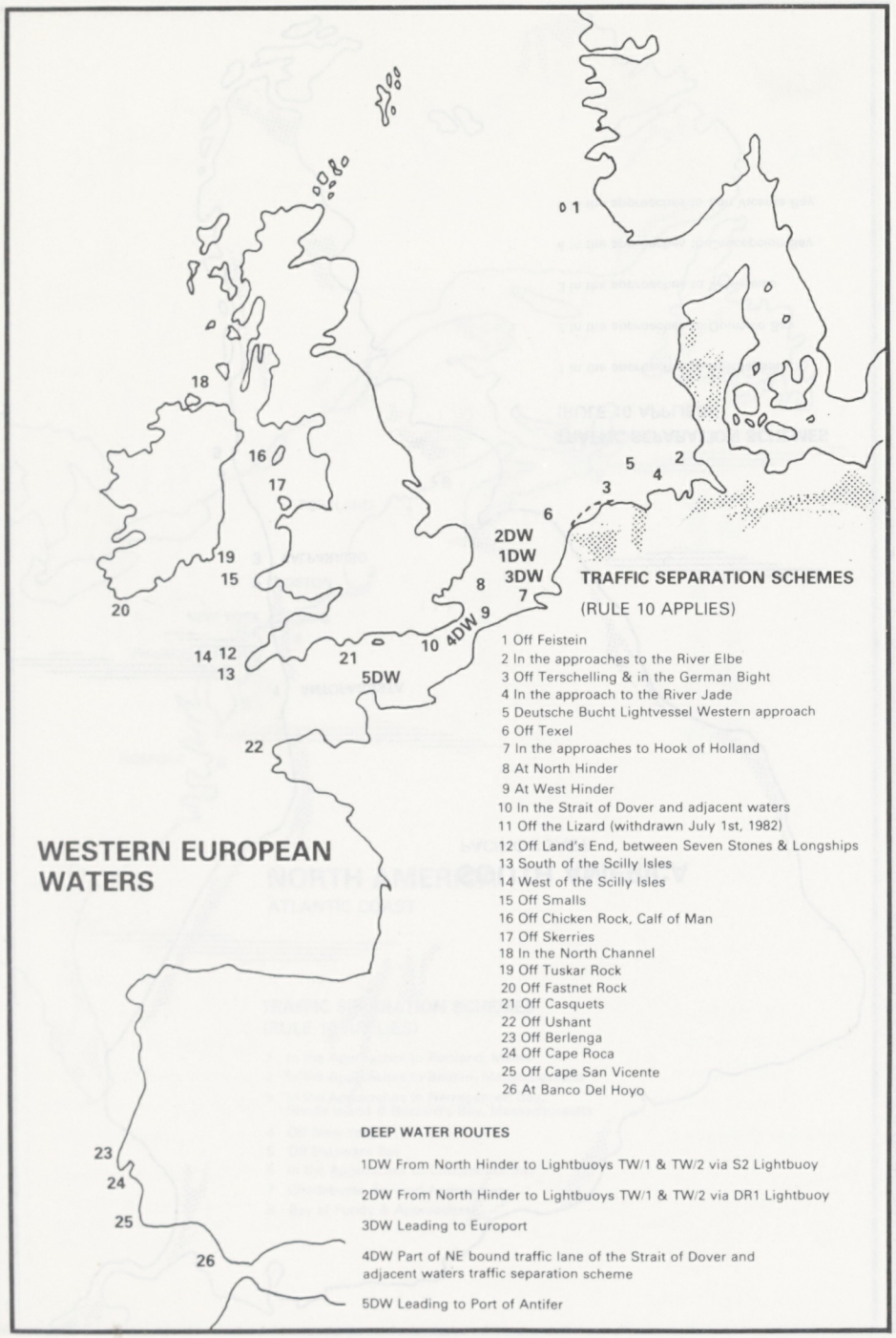

WESTERN EUROPEAN WATERS

TRAFFIC SEPARATION SCHEMES
(RULE 10 APPLIES)

1 Off Feistein
2 In the approaches to the River Elbe
3 Off Terschelling & in the German Bight
4 In the approach to the River Jade
5 Deutsche Bucht Lightvessel Western approach
6 Off Texel
7 In the approaches to Hook of Holland
8 At North Hinder
9 At West Hinder
10 In the Strait of Dover and adjacent waters
11 Off the Lizard (withdrawn July 1st, 1982)
12 Off Land's End, between Seven Stones & Longships
13 South of the Scilly Isles
14 West of the Scilly Isles
15 Off Smalls
16 Off Chicken Rock, Calf of Man
17 Off Skerries
18 In the North Channel
19 Off Tuskar Rock
20 Off Fastnet Rock
21 Off Casquets
22 Off Ushant
23 Off Berlenga
24 Off Cape Roca
25 Off Cape San Vicente
26 At Banco Del Hoyo

DEEP WATER ROUTES

1DW From North Hinder to Lightbuoys TW/1 & TW/2 via S2 Lightbuoy

2DW From North Hinder to Lightbuoys TW/1 & TW/2 via DR1 Lightbuoy

3DW Leading to Europort

4DW Part of NE bound traffic lane of the Strait of Dover and adjacent waters traffic separation scheme

5DW Leading to Port of Antifer

SOUTH EAST ASIA

TRAFFIC SEPARATION SCHEMES
(RULE 10 APPLIES)

1 At one Fathom Bank
2 In the Singapore Strait
3 Deep water route forming part of the Eastbound Traffic Separation Scheme in the Singapore Strait
4 At Horsburgh Light Area

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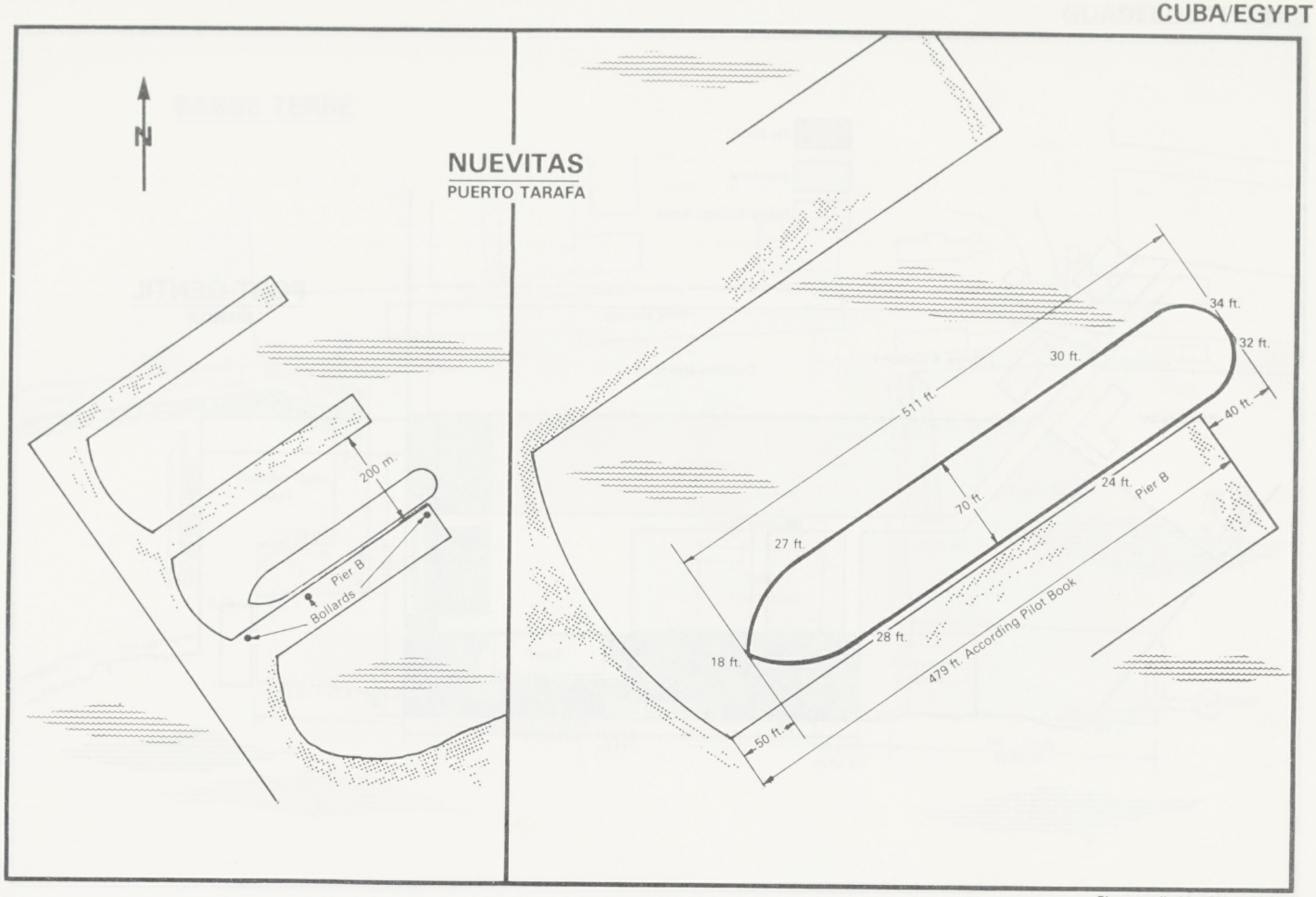
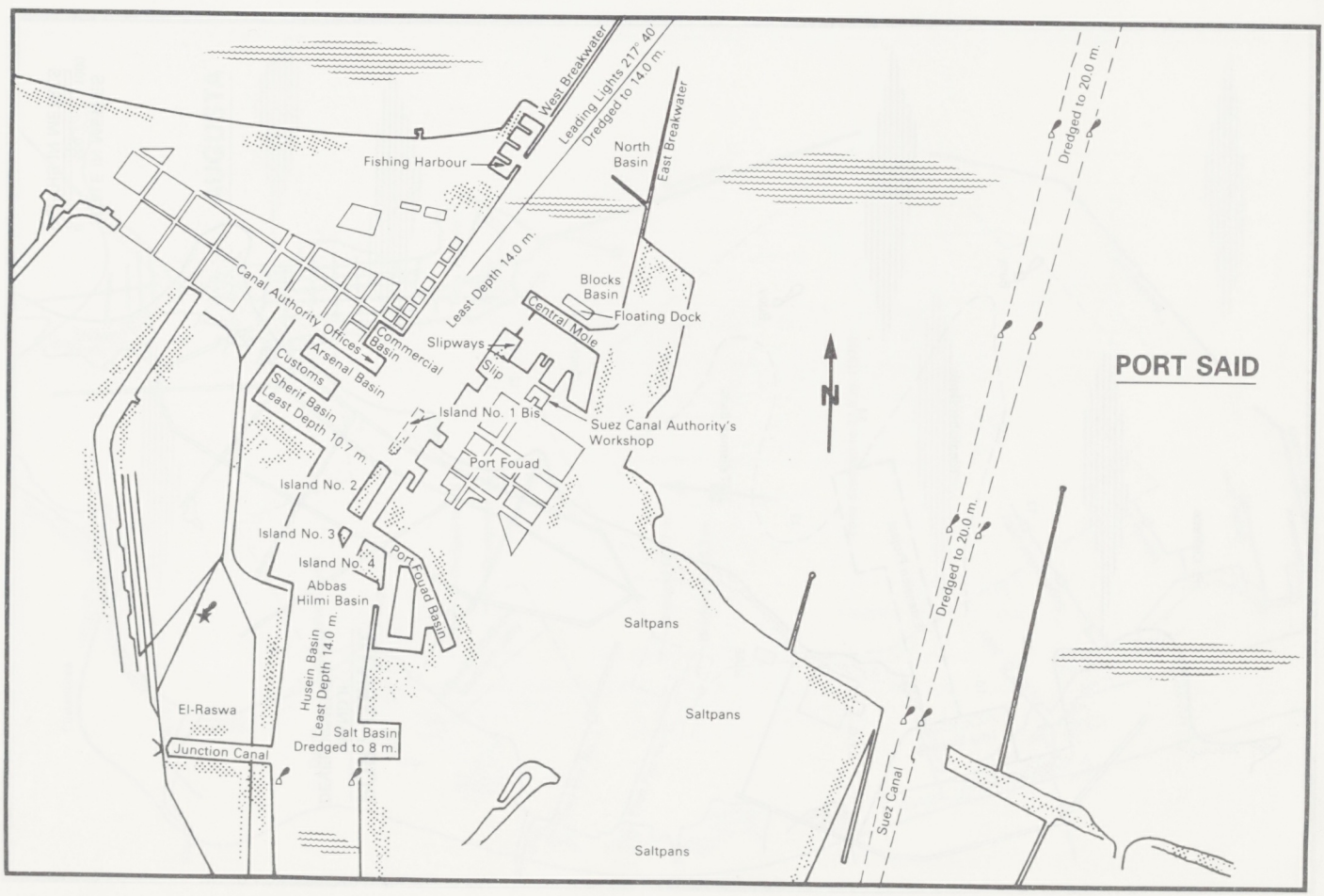
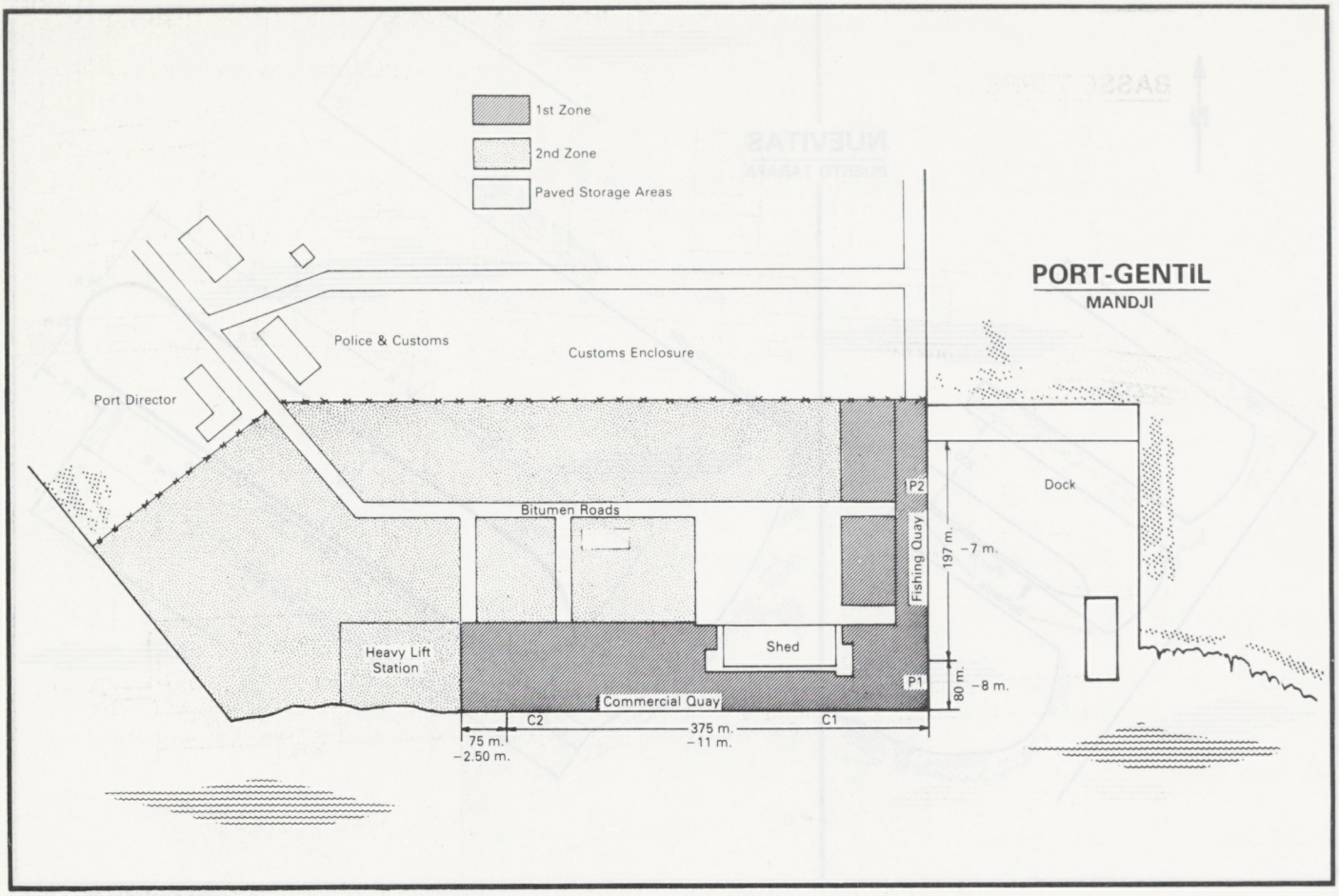
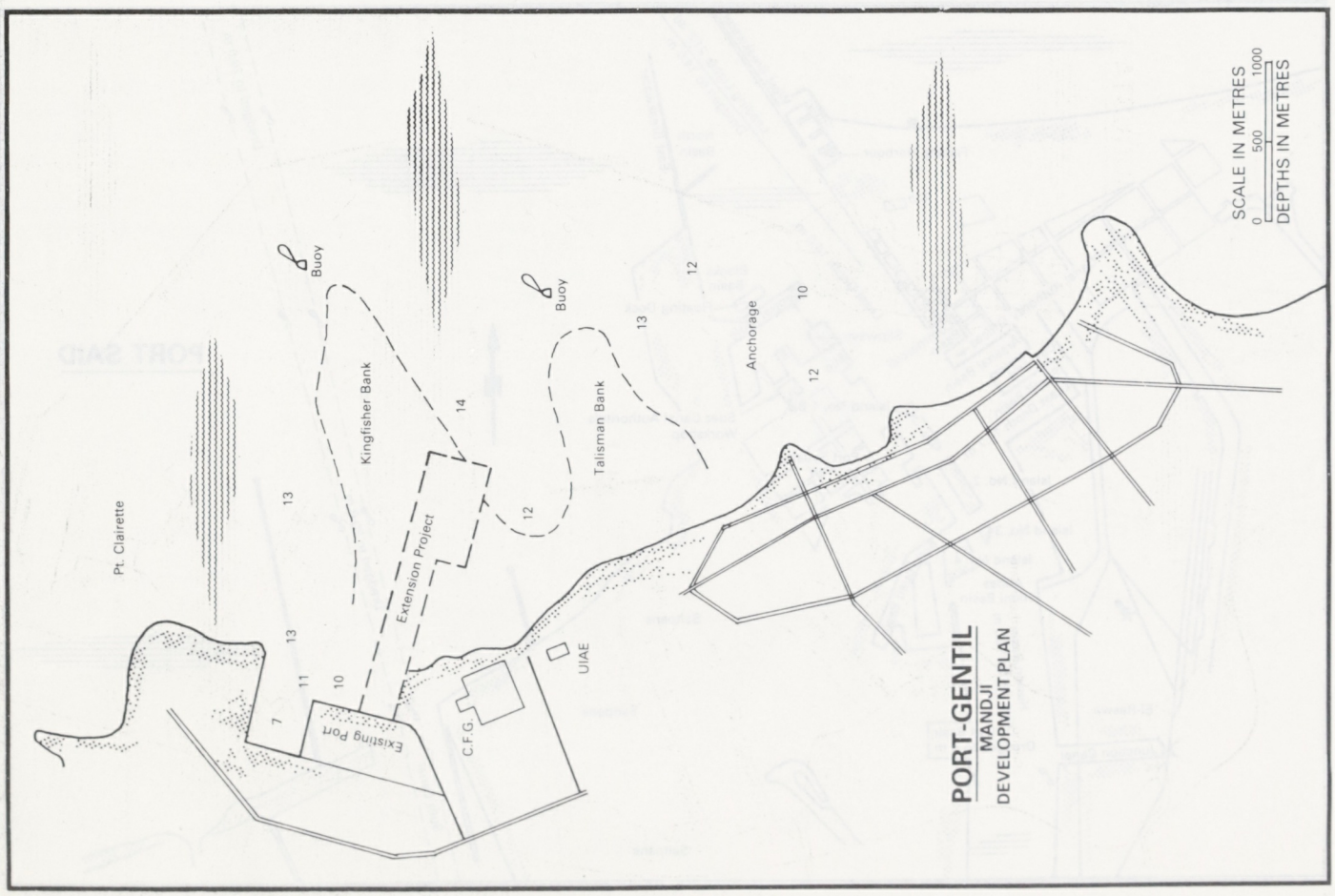
UNITED KINGDOM	Lowestoft
URUGUAY	Colonia
VENEZUELA	Matanzas – San Felix



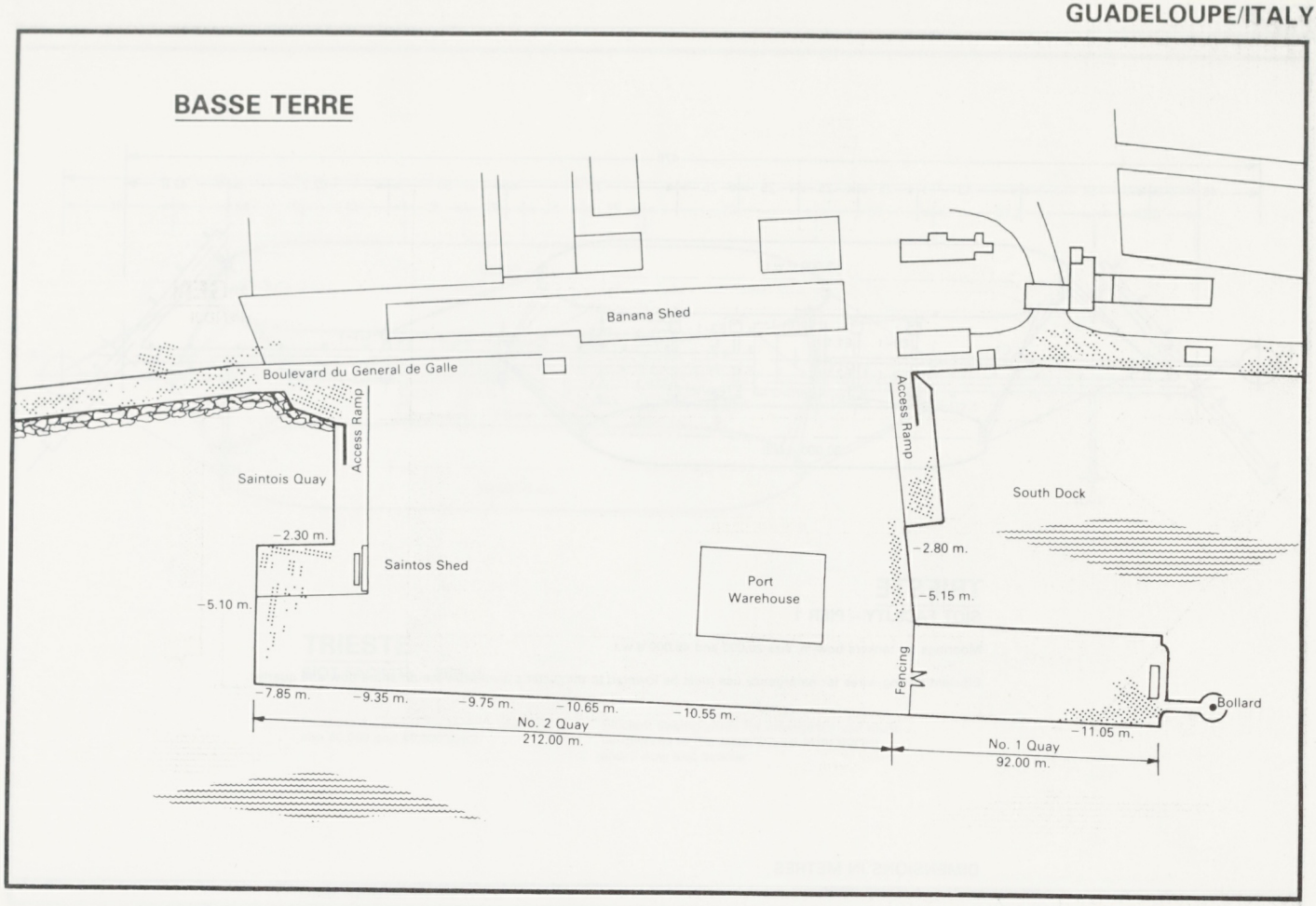
Plan supplied by Ship's Master

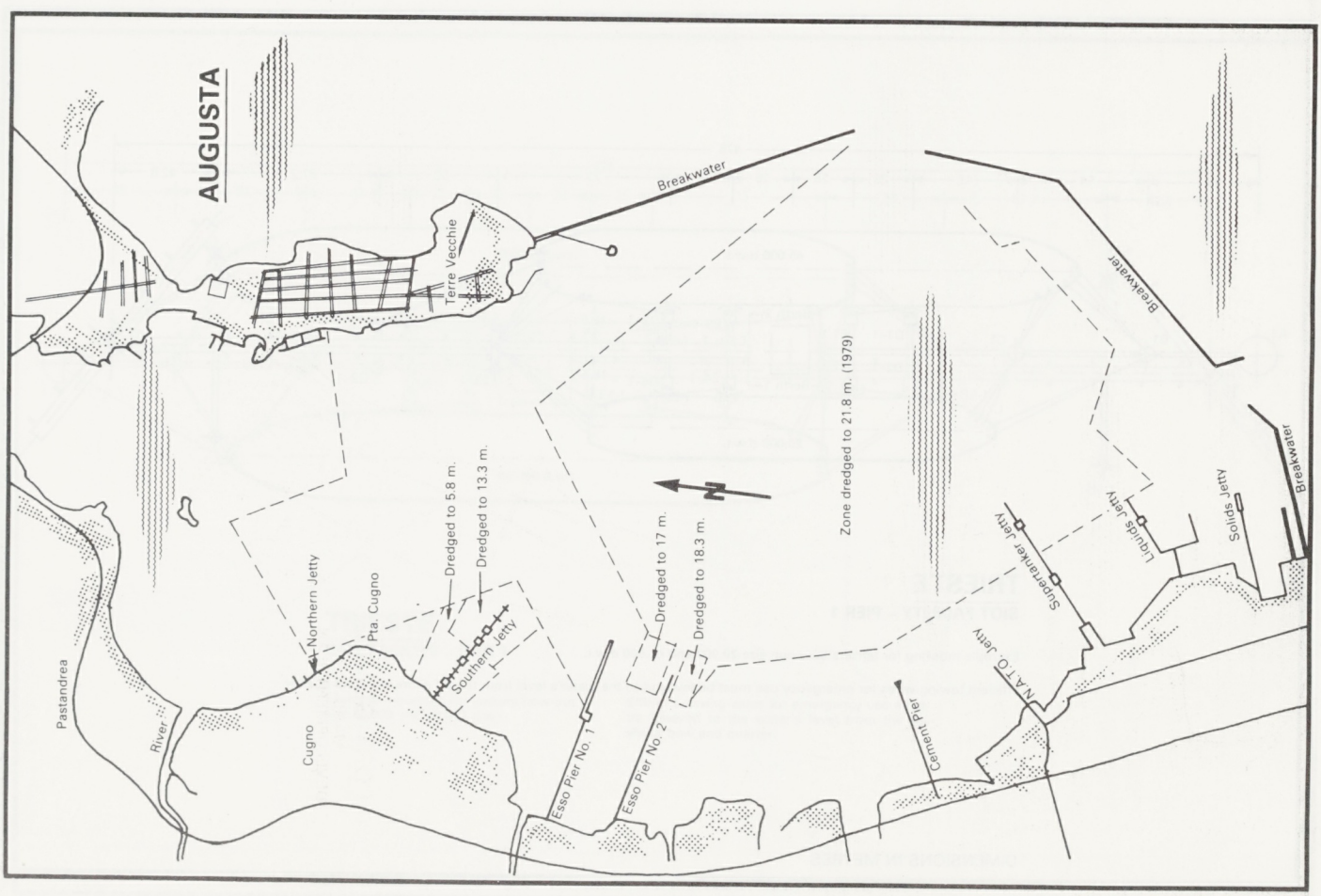


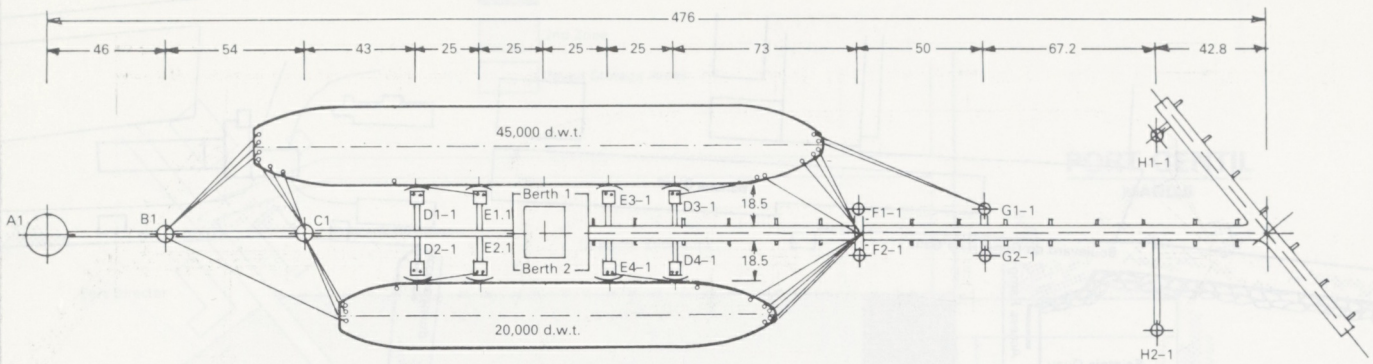

1st Zone
2nd Zone
Paved Storage Areas
PORT-GENTIL
MANDJI
Police & Customs
Customs Enclosure
Port Director
Bitumen Roads
Dock
P2
Fishing Quay
197 m.
–7 m.
Heavy Lift Station
Shed
80 m.
–8 m.
P1
Commercial Quay
C2
C1
375 m.
–11 m.
75 m.
–2.50 m.


SCALE IN METRES
0
500
1000
DEPTHS IN METRES
Buoy
Buoy
Kingfisher Bank
Talisman Bank
Anchorage
Pt. Clairette
Extension Project
Existing Port
C.F.G.
UIAE
PORT-GENTIL
MANDJI
DEVELOPMENT PLAN

BASSE TERRE


Banana Shed
Boulevard du General de Galle
Access Ramp
Saintois Quay
−2.30 m.
−5.10 m.
Saintos Shed
Port Warehouse
Access Ramp
South Dock
−2.80 m.
−5.15 m.
Fencing
Bollard
−7.85 m.
−9.35 m.
−9.75 m.
−10.65 m.
−10.55 m.
−11.05 m.
No. 2 Quay
212.00 m.
No. 1 Quay
92.00 m.


AUGUSTA
Breakwater
Terre Vecchie
Breakwater
Zone dredged to 21.8 m. (1979)
Breakwater
Northern Jetty
Pta. Cugno
Dredged to 5.8 m.
Dredged to 13.3 m.
Southern Jetty
Dredged to 17 m.
Dredged to 18.3 m.
Supertanker Jetty
Liquids Jetty
Solids Jetty
N.A.T.O. Jetty
Pastandrea
River
Cugno
Esso Pier No. 1
Esso Pier No. 2
Cement Pier



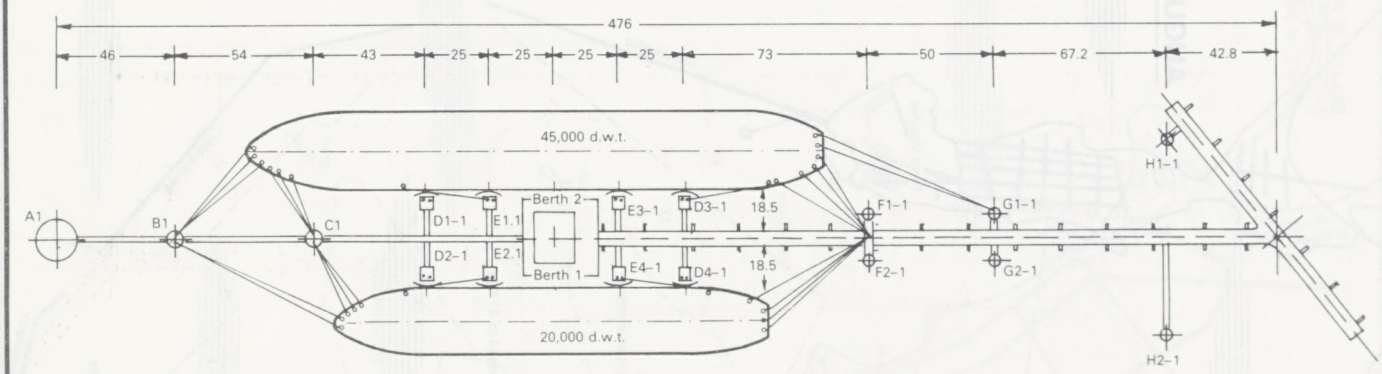
TRIESTE

SIOT FACILITY – PIER 1

Moorings for tankers bow-in, size 20,000 and 45,000 d.w.t.

Efficient towing-wires for emergency use must be lowered to the water's level from the off shore bow and quarter.

DIMENSIONS IN METRES



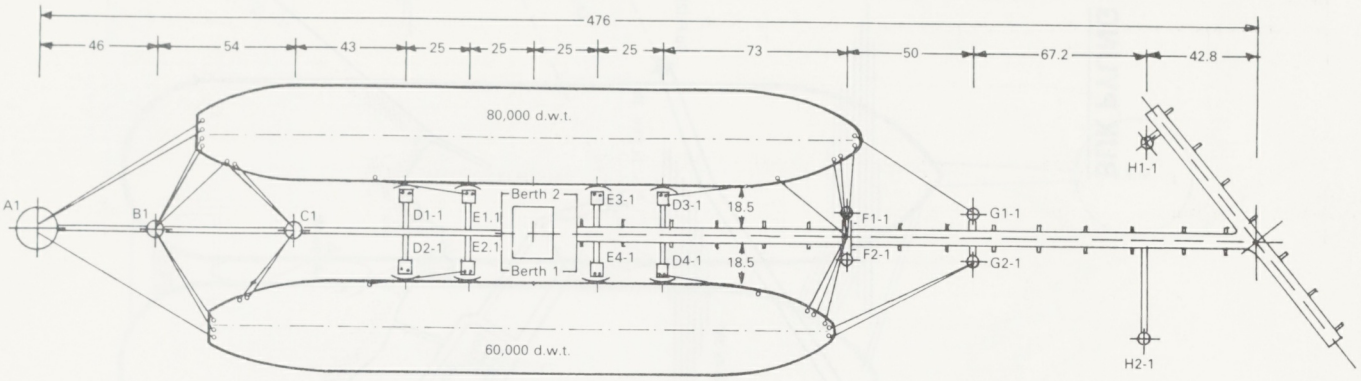
TRIESTE

SIOT FACILITY – PIER 1

Example mooring for tankers bow-out, size 20,000 and 45,000 d.w.t.

Efficient towing-wires for emergency use must be lowered to the water's level from the off shore bow and quarter

DIMENSIONS IN METRES



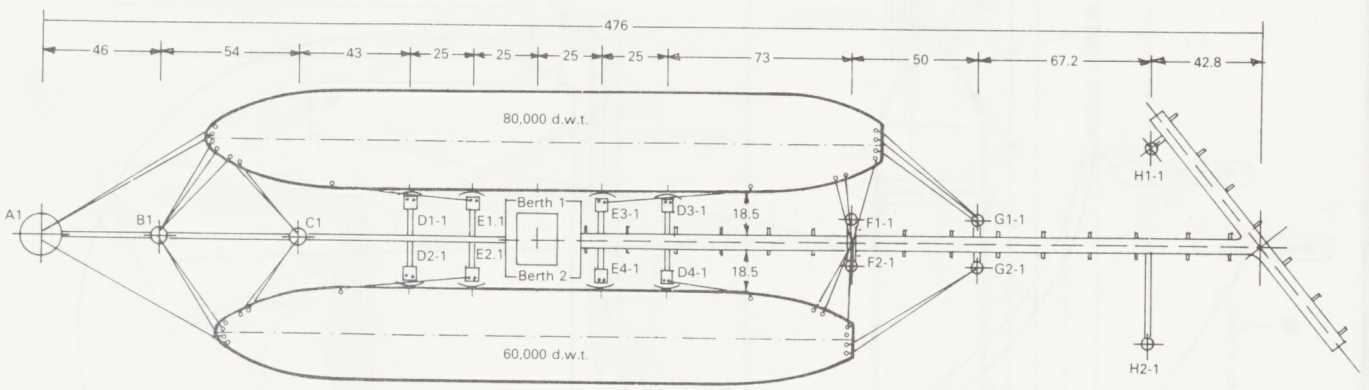
TRIESTE

SIOT FACILITY – PIER 1

Example moorings for tankers bow-in, size 60,000 and 80,000 d.w.t.

Efficient towing-wires for emergency use must be lowered to the water's level from the off shore bow and quarter.

DIMENSIONS IN METRES



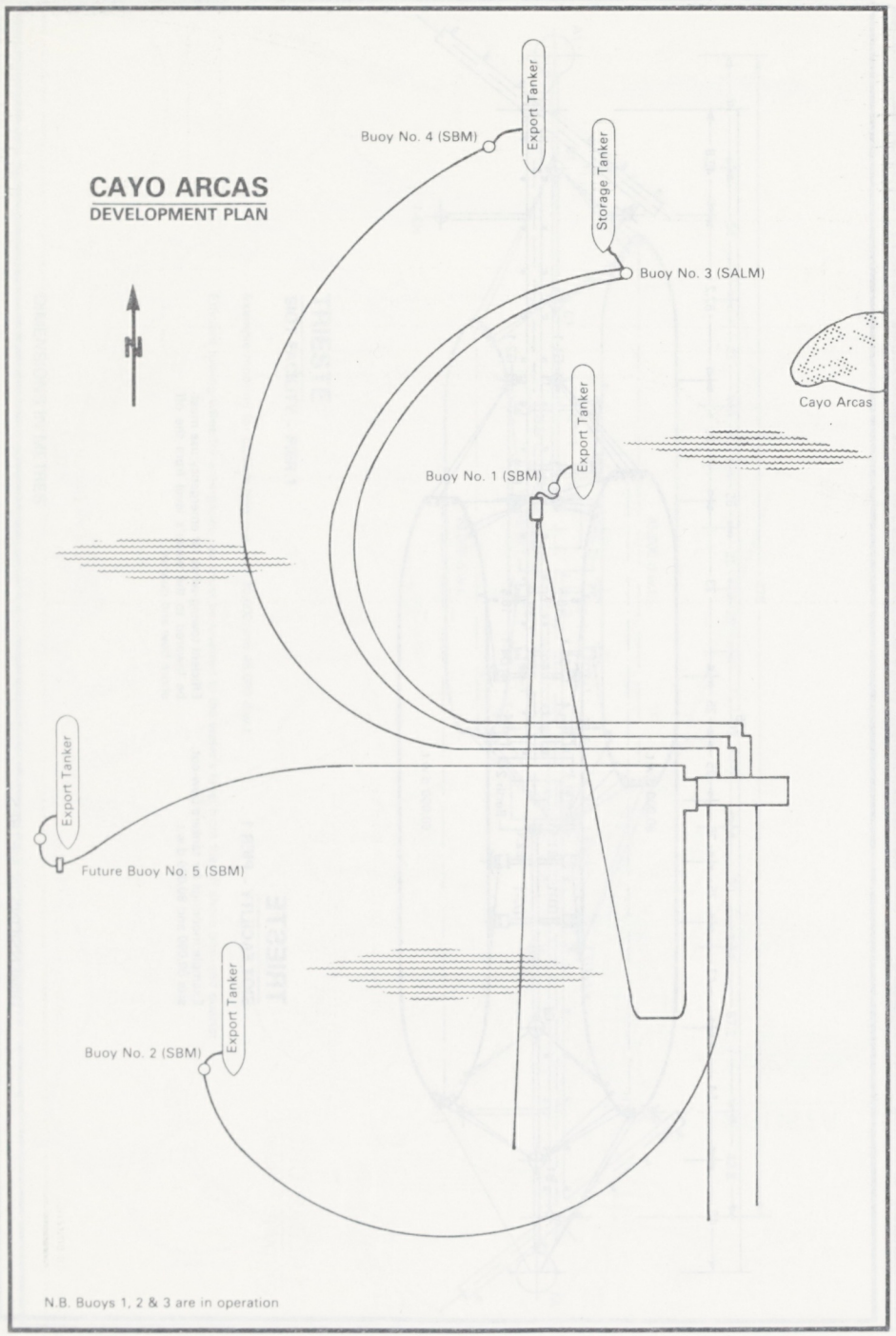
TRIESTE

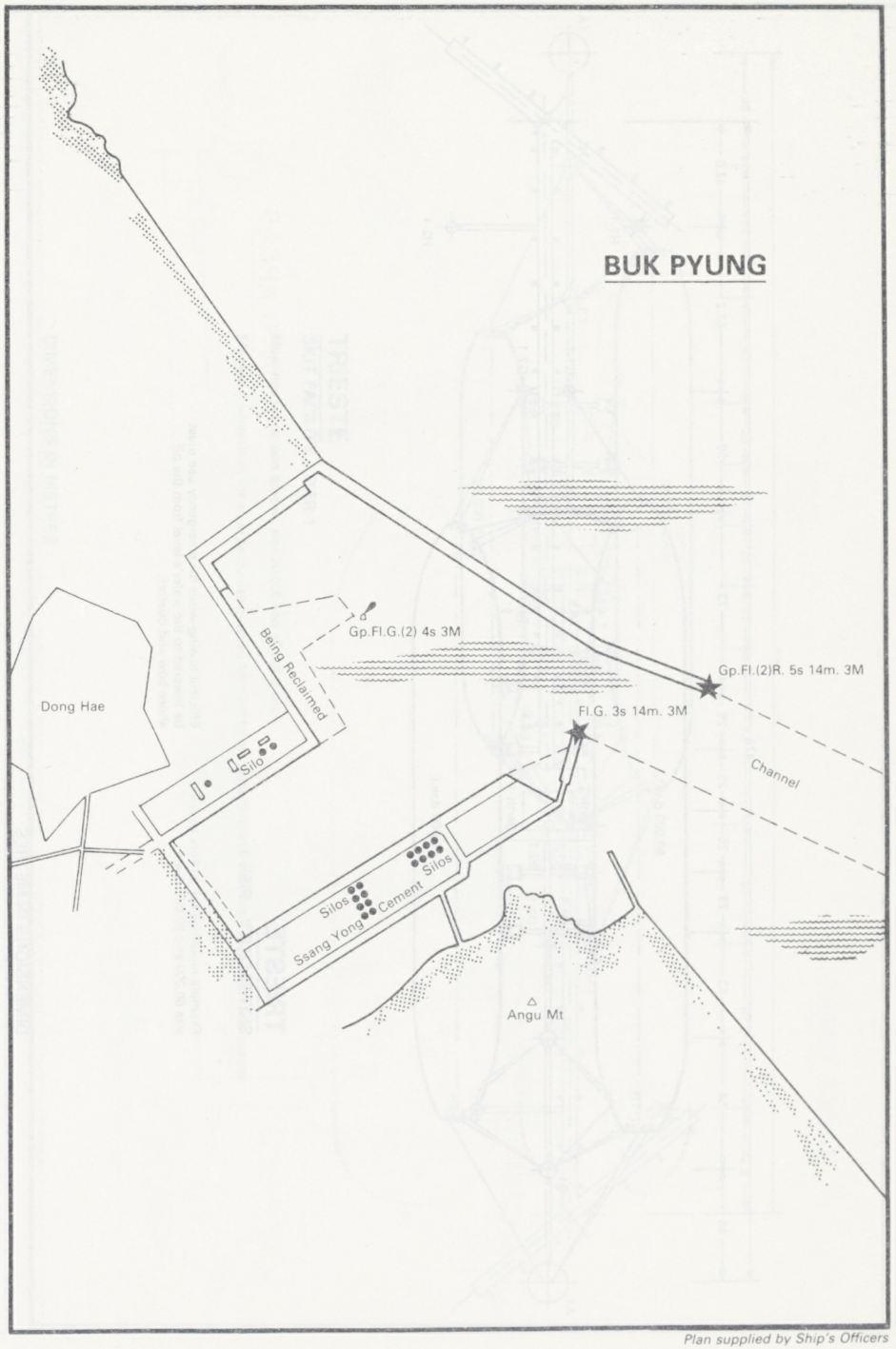
SIOT FACILITY – PIER 1

Example moorings for tankers bow-out, size 60,000 and 80,000 d.w.t.

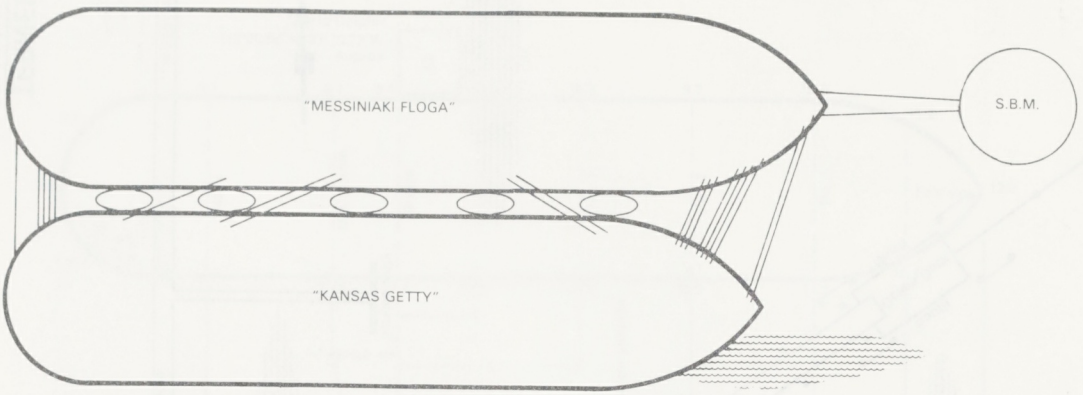
Efficient towing-wires for emergency use must be lowered to the water's level from the off shore bow and quarter.

DIMENSIONS IN METRES





Plan supplied by Ship's Officers

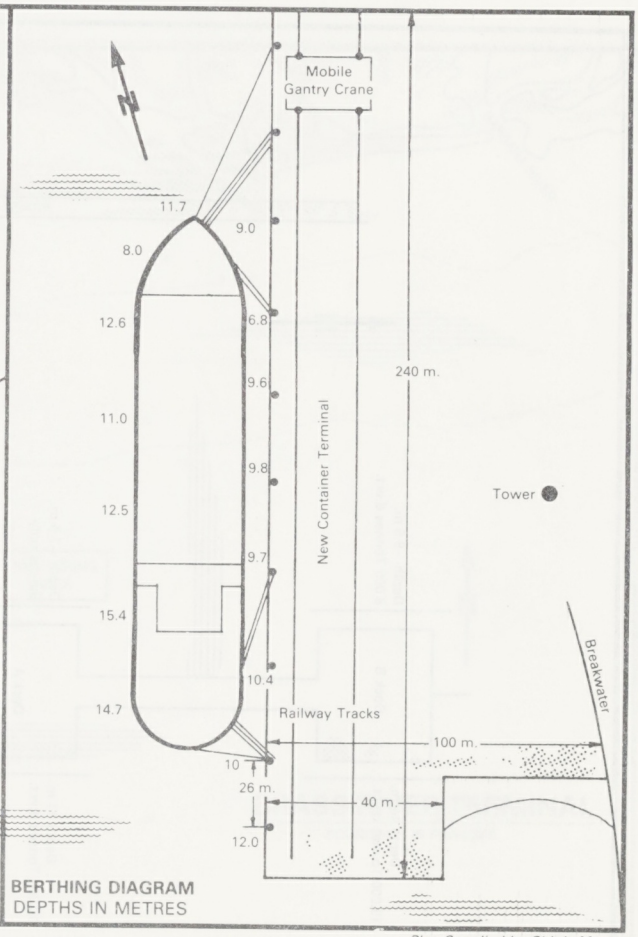


CAYO ARCAS

Plan Supplied by Ship's Master

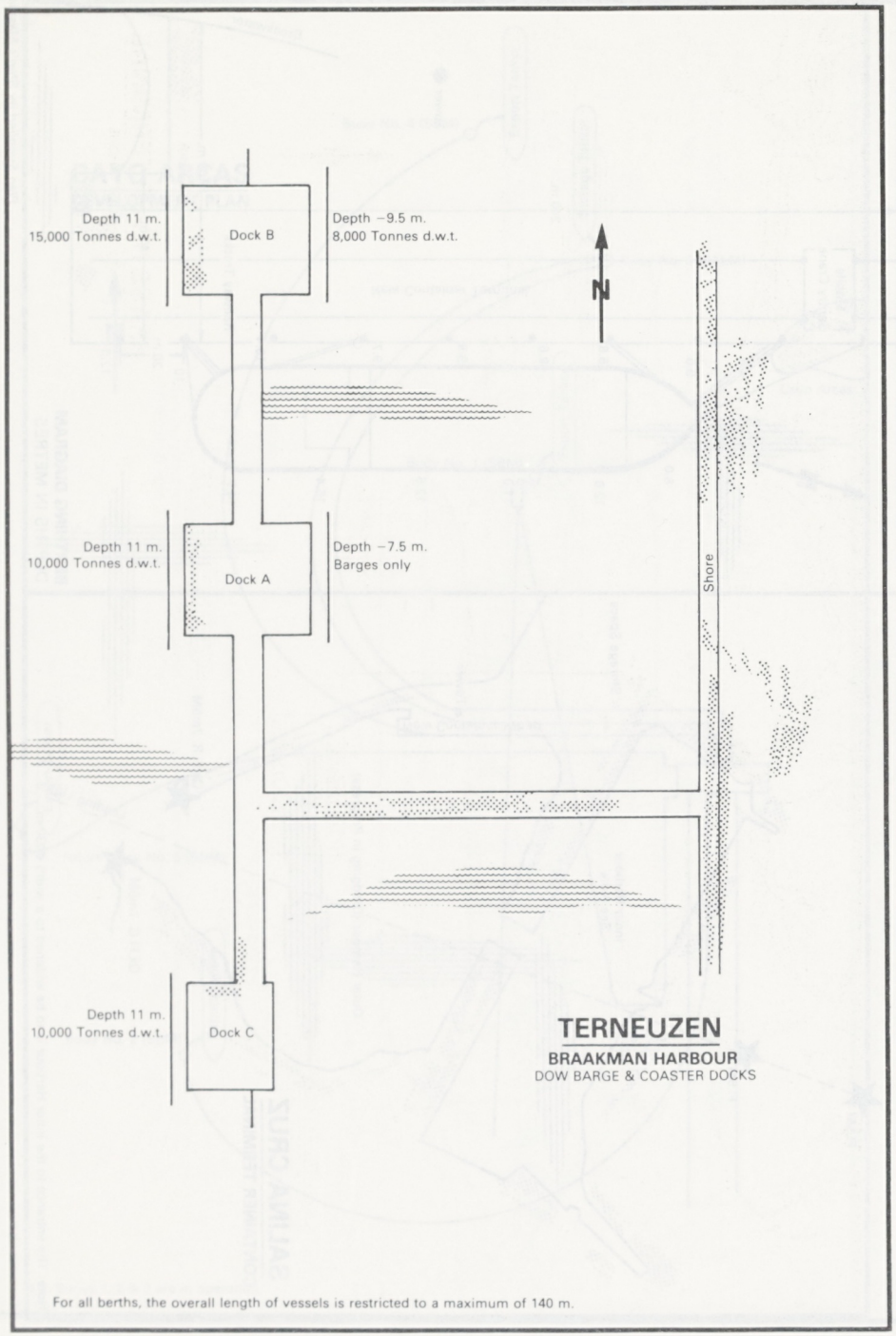
SALINA CRUZ
CONTAINER TERMINAL

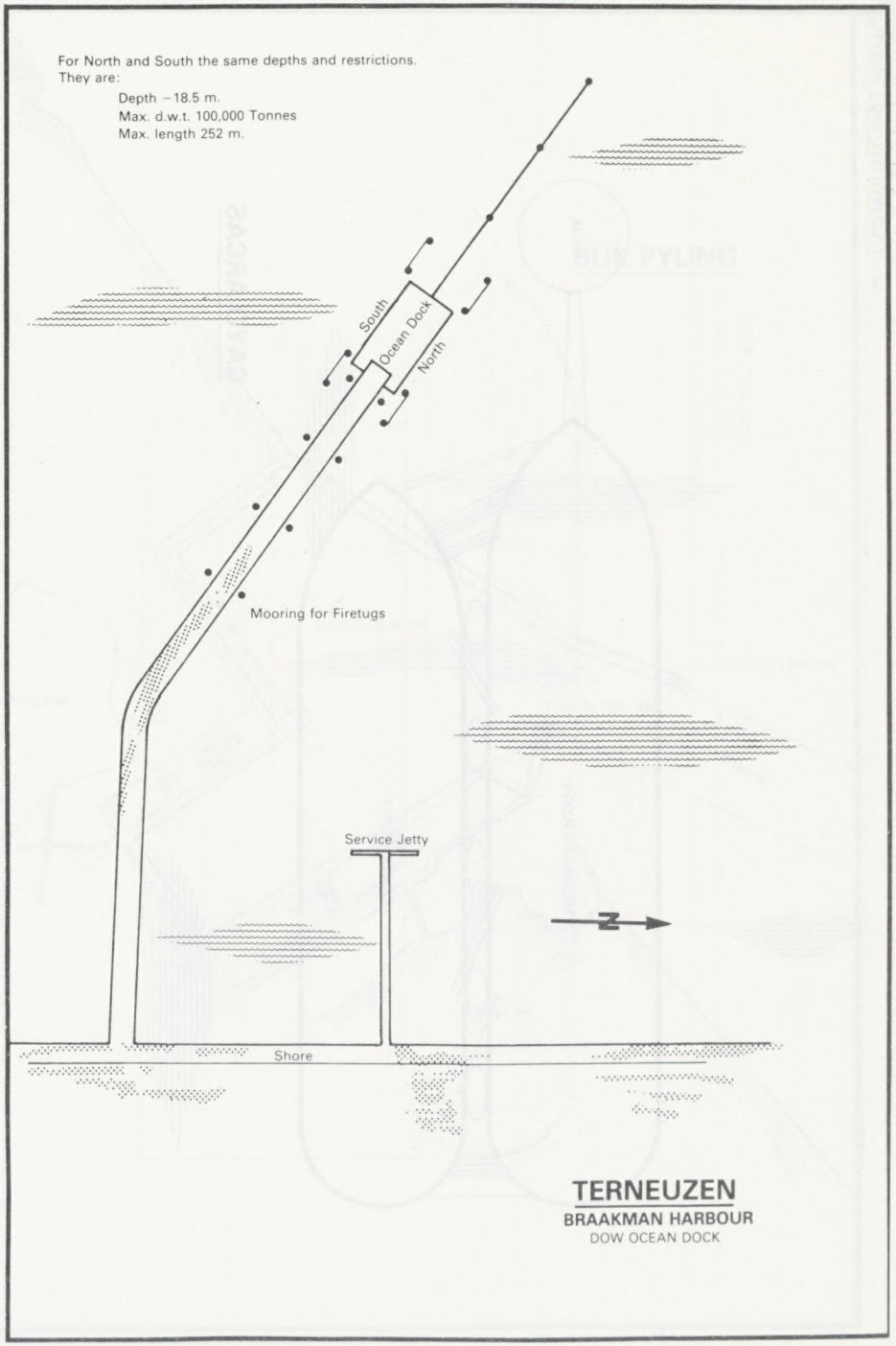
Note: The entrance to the Inner Harbour is to be widened to a width of 30 m.



BERTHING DIAGRAM
DEPTHS IN METRES

Plan Supplied by Ship's Master

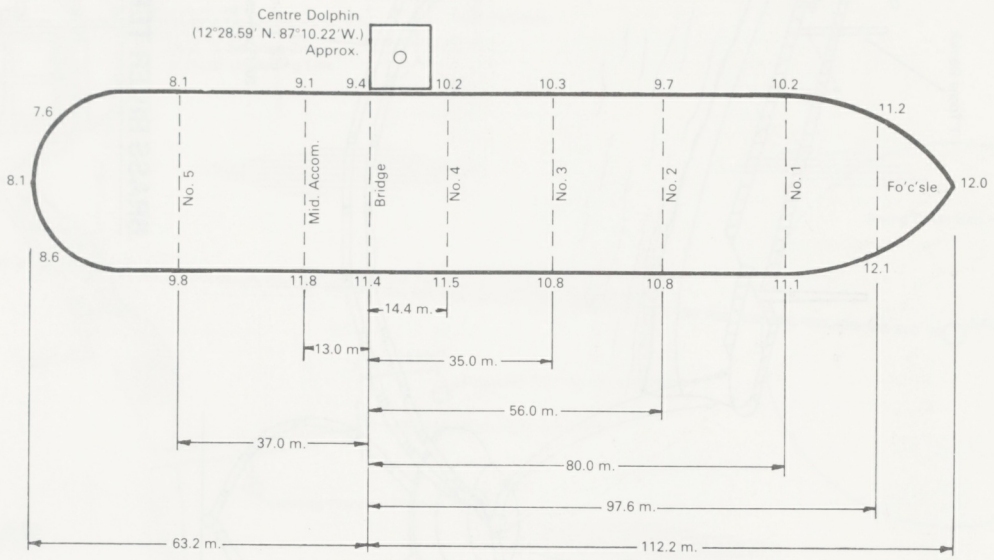

Depth 11 m.
15,000 Tonnes d.w.t.
Dock B
Depth −9.5 m.
8,000 Tonnes d.w.t.
N
Depth 11 m.
10,000 Tonnes d.w.t.
Dock A
Depth −7.5 m.
Barges only
Shore
Depth 11 m.
10,000 Tonnes d.w.t.
Dock C
TERNEUZEN
BRAAKMAN HARBOUR
DOW BARGE & COASTER DOCKS
For all berths, the overall length of vessels is restricted to a maximum of 140 m.


For North and South the same depths and restrictions.
They are:
Depth −18.5 m.
Max. d.w.t. 100,000 Tonnes
Max. length 252 m.
South
Ocean Dock
North
Mooring for Firetugs
Service Jetty
N
Shore
TERNEUZEN
BRAAKMAN HARBOUR
DOW OCEAN DOCK

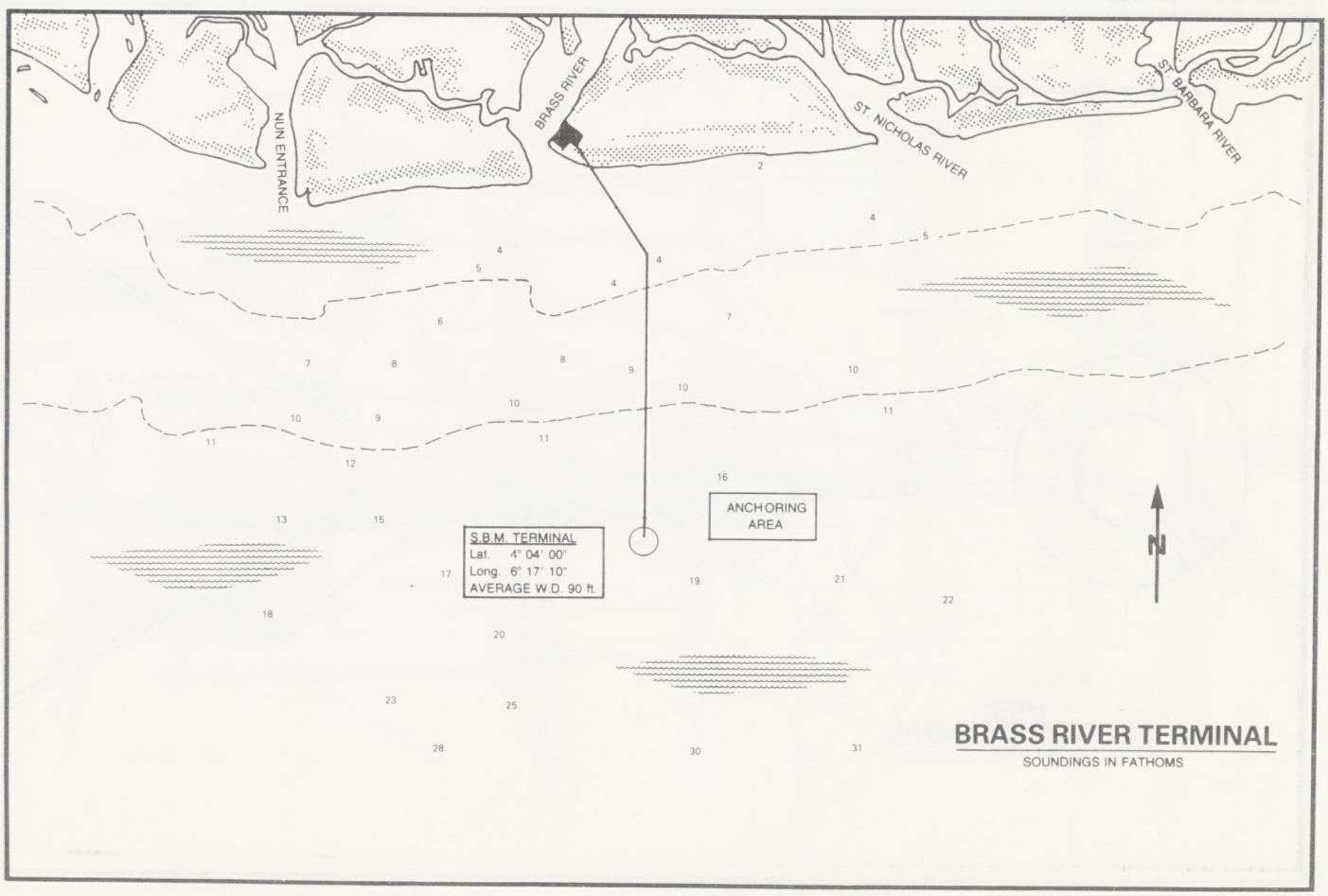
CORINTO

BANANA PIER

HAND LEAD SOUNDINGS IN METRES (INCLUDES LEAD)

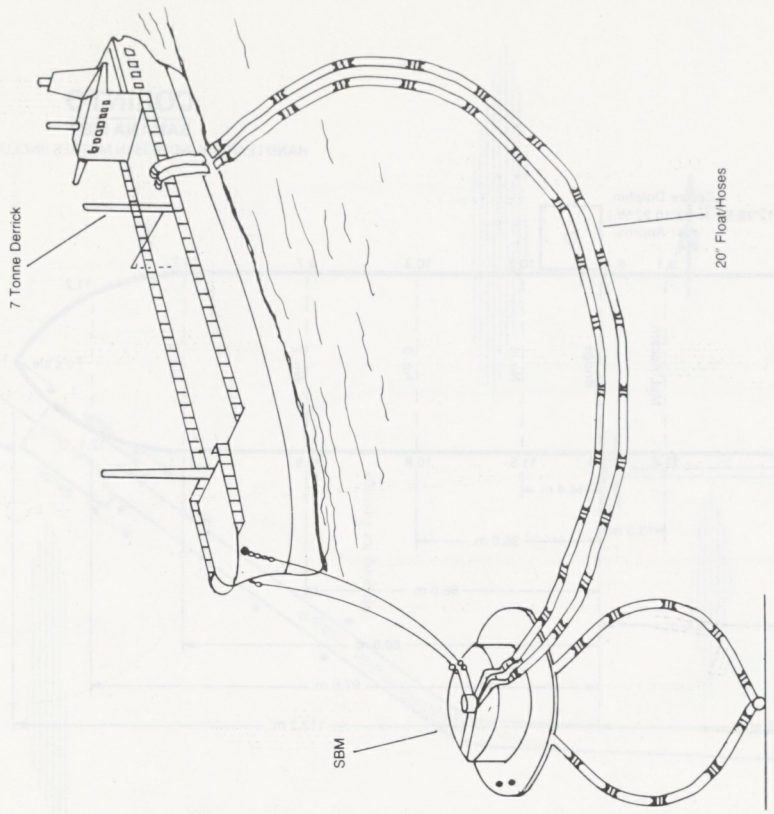


Plan Supplied by Ship's Officers



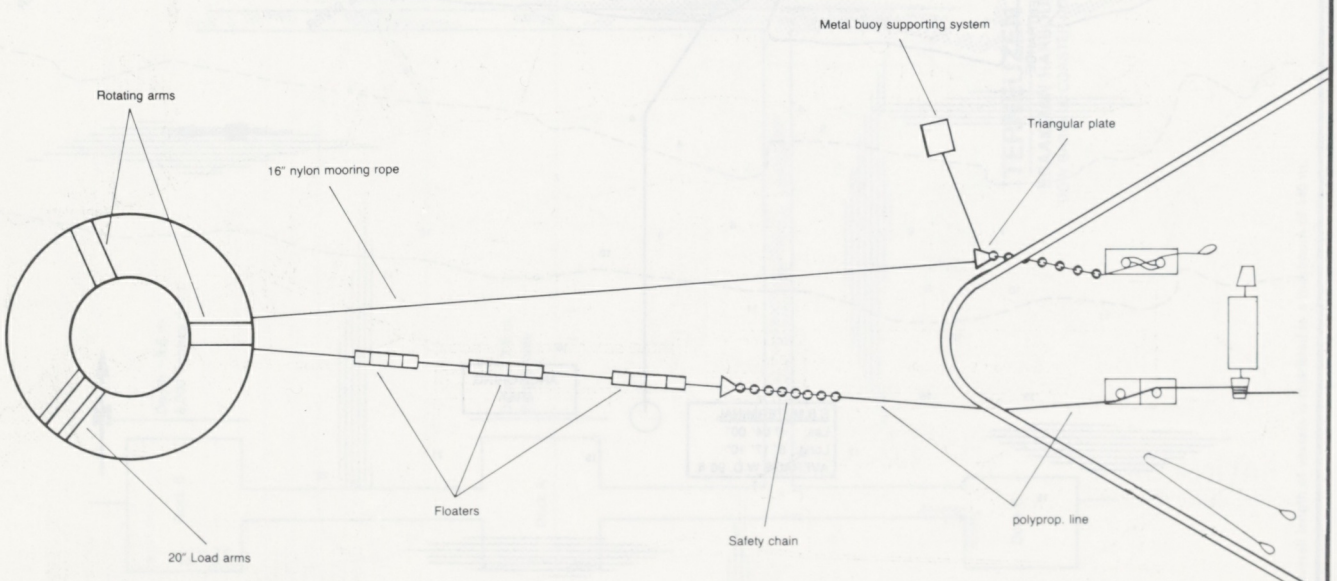
BRASS RIVER TERMINAL

SOUNDINGS IN FATHOMS

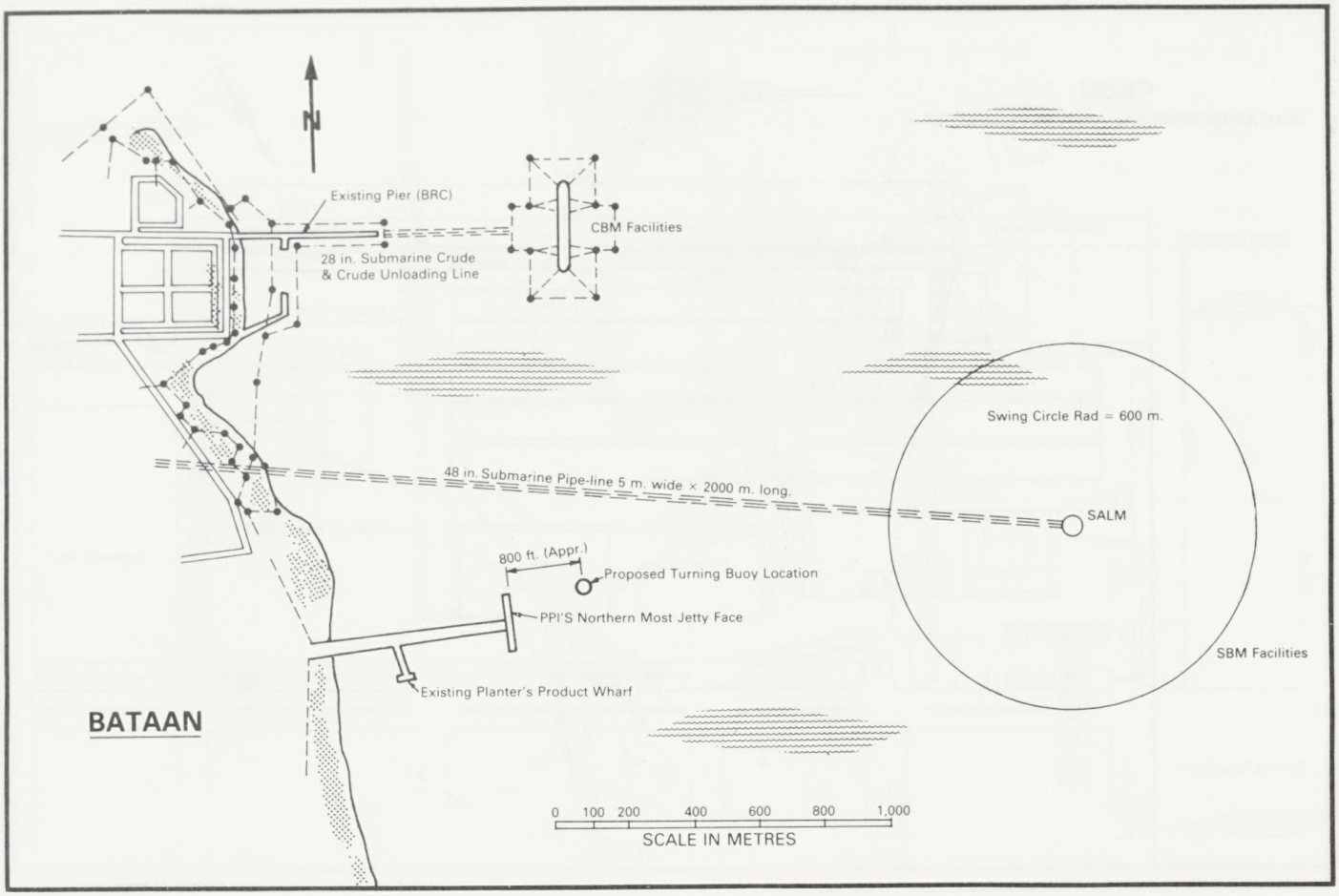


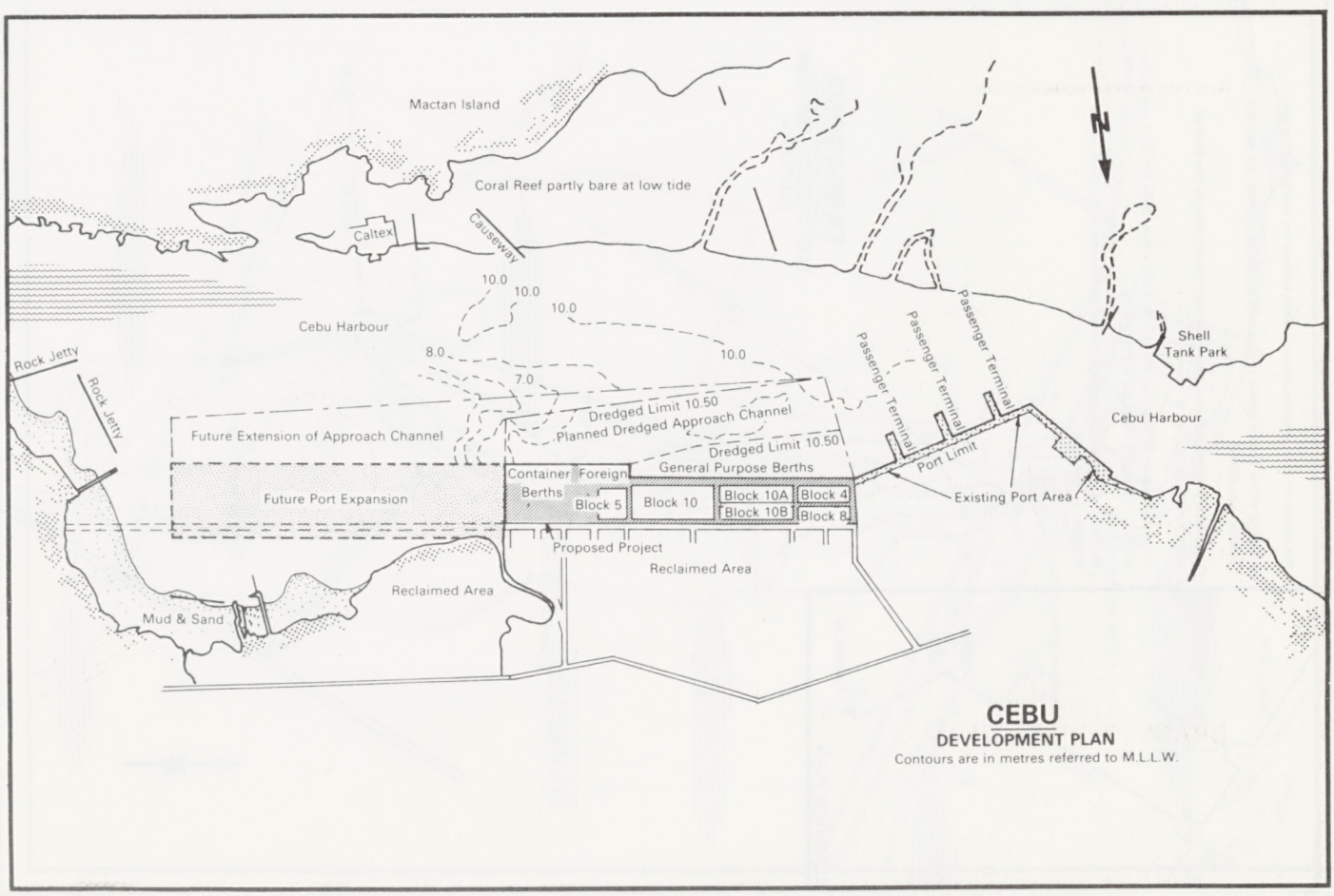
BRASS RIVER TERMINAL

BRASS TERMINAL SHORE SBM MOORING ARRANGEMENT



BRASS RIVER TERMINAL





CEBU

DEVELOPMENT PLAN

Contours are in metres referred to M.L.L.W.

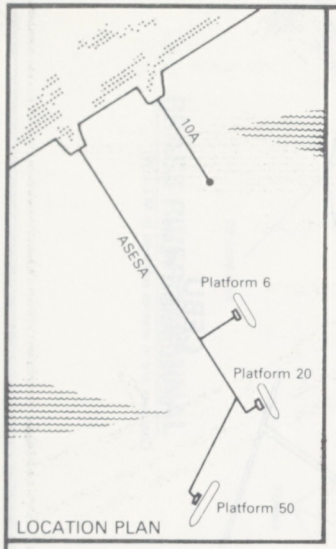
No repairs to main engines allowed while vessels are alongside the pier.

Mooring ropes shown above are the safe minimum number for average weather conditions.

If necessary, additional mooring ropes may be required by the Pilot of ASESA Harbour Master.

Nylon ropes may be supplied by ASESA if any vessel does not have a sufficient quantity of suitable ropes for safe mooring.

Mooring ropes must be carefully tended to hold the vessel close to the dolphins at all times.

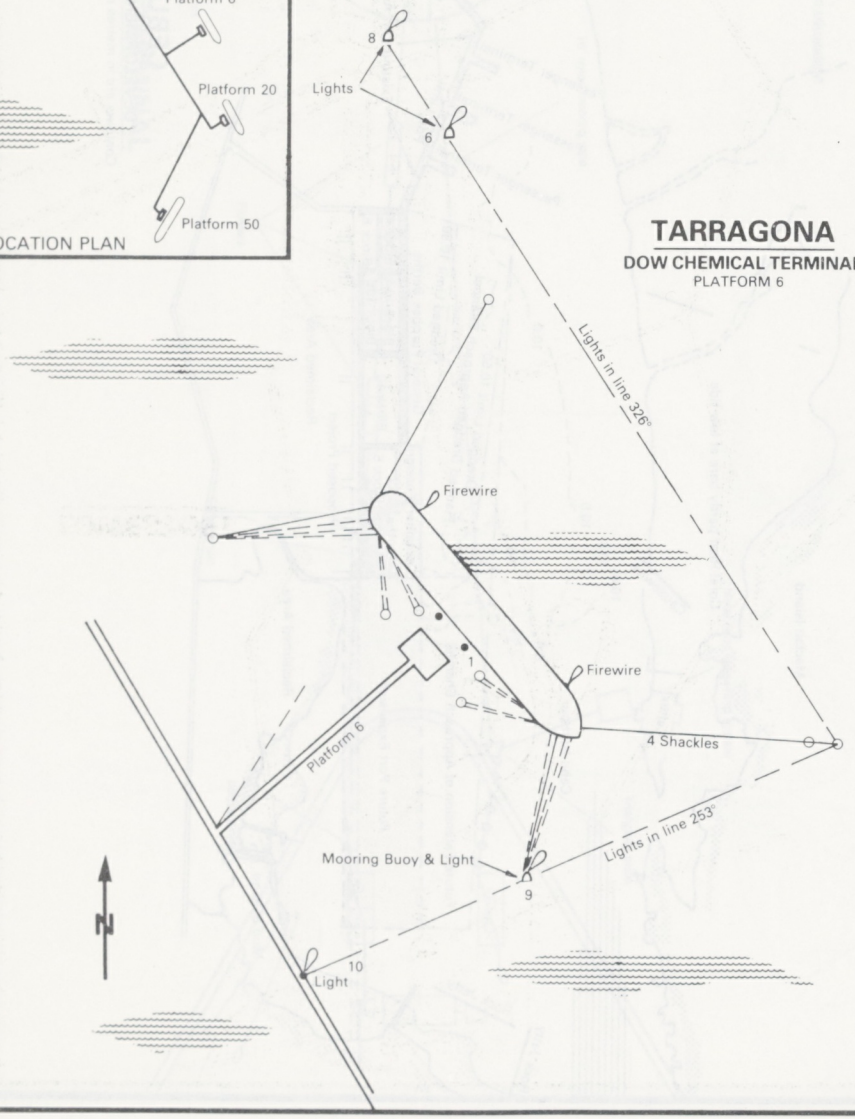


LOCATION PLAN

TARRAGONA

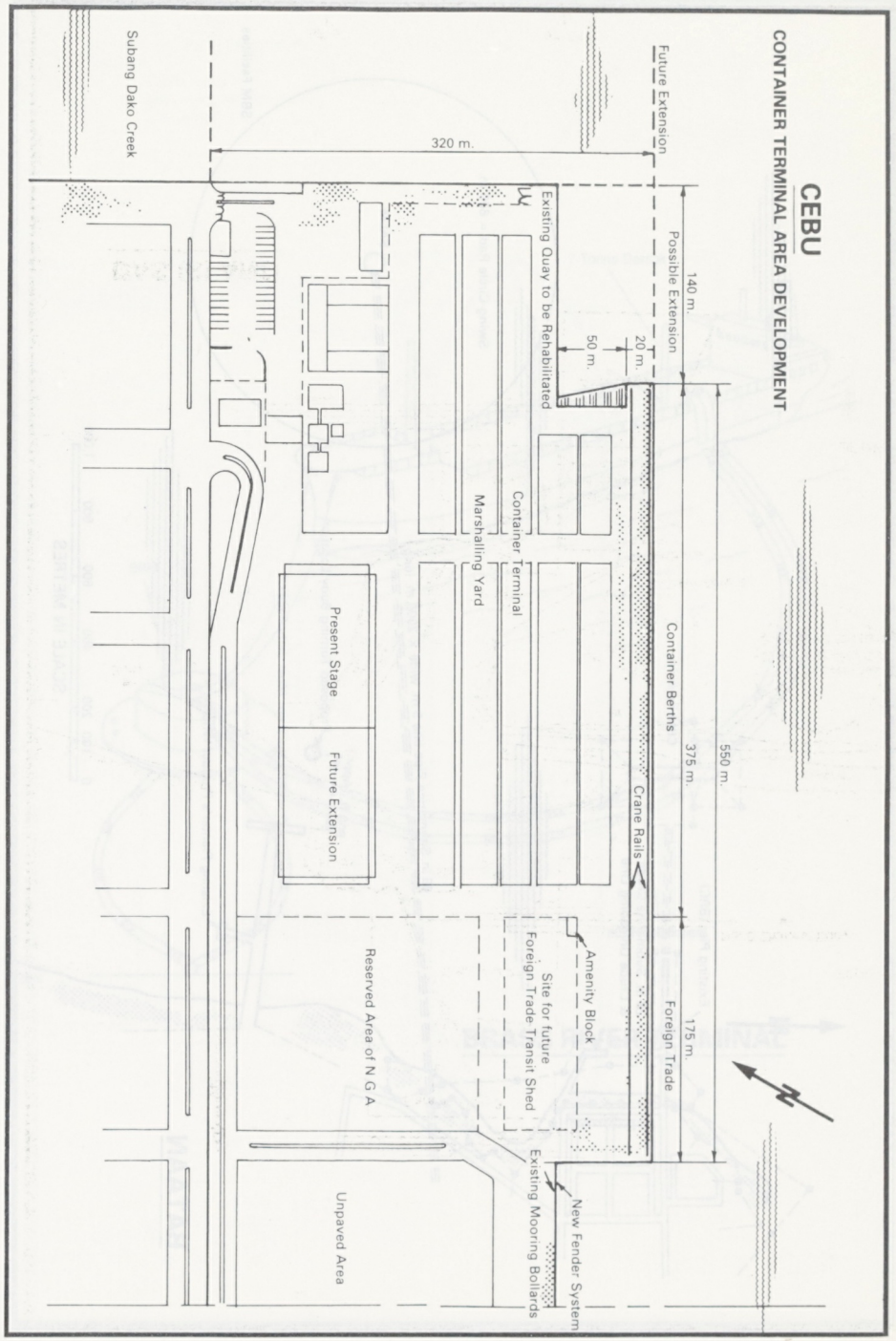
DOW CHEMICAL TERMINAL

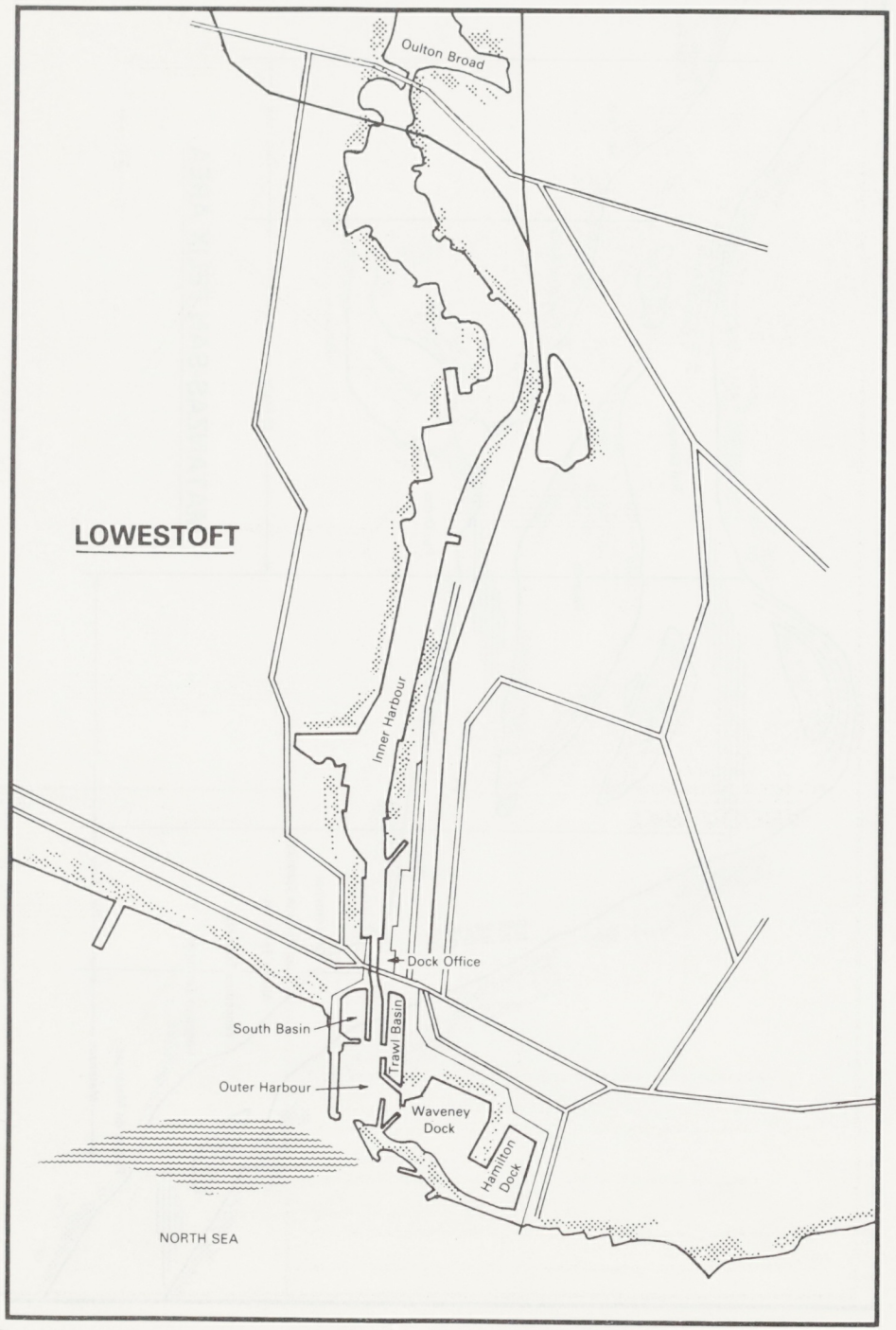
PLATFORM 6

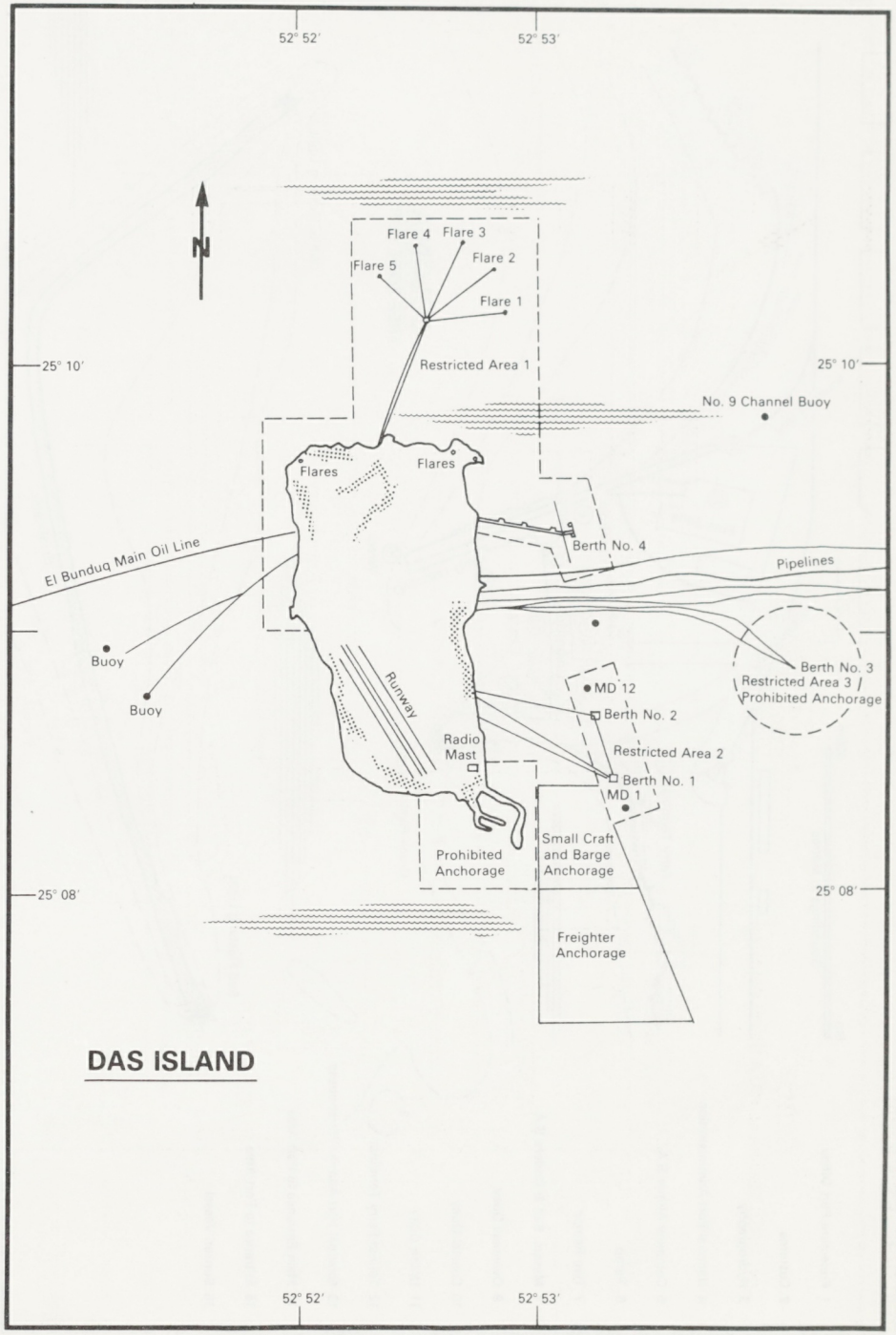


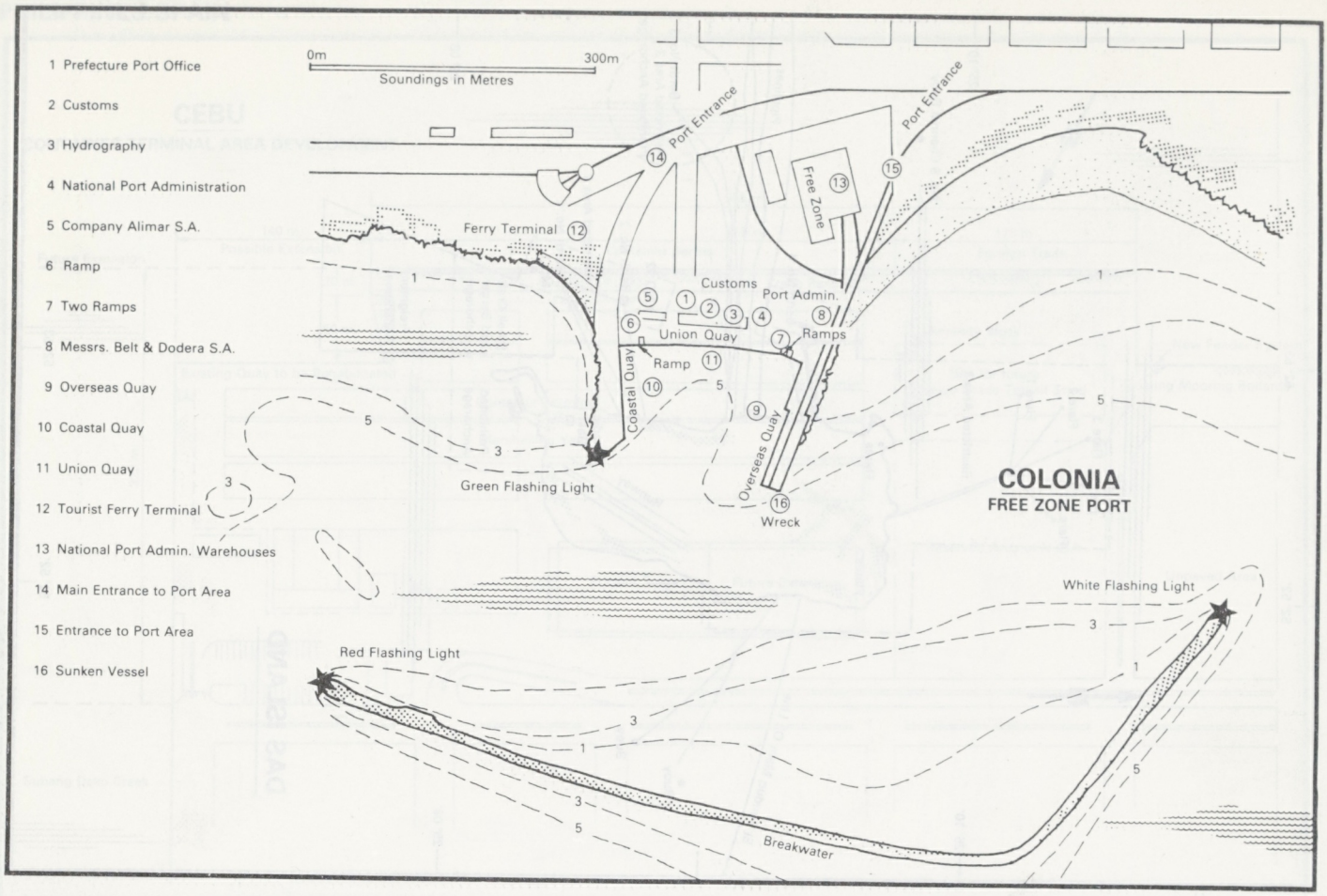
CEBU

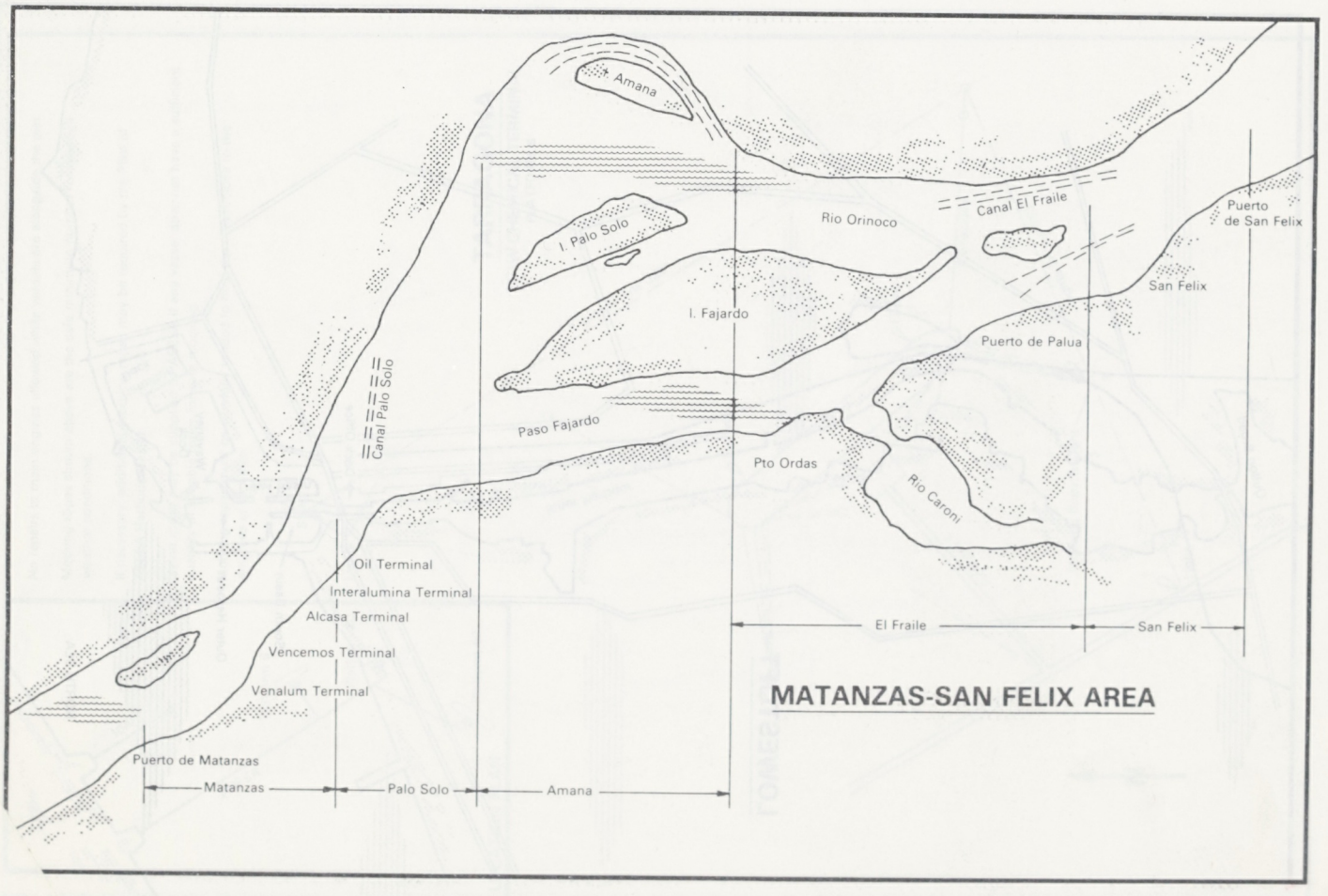
CONTAINER TERMINAL AREA DEVELOPMENT




LOWESTOFT
Oulton Broad
Inner Harbour
Dock Office
South Basin
Trawl Basin
Outer Harbour
Waveney Dock
Hamilton Dock
NORTH SEA


52° 52'
52° 53'
N
Flare 4
Flare 3
Flare 5
Flare 2
Flare 1
Restricted Area 1
25° 10'
No. 9 Channel Buoy
Flares
Flares
El Bunduq Main Oil Line
Berth No. 4
Pipelines
Buoy
Buoy
Runway
Berth No. 3
Restricted Area 3
Prohibited Anchorage
MD 12
Berth No. 2
Radio Mast
Restricted Area 2
Berth No. 1
MD 1
Small Craft and Barge Anchorage
Prohibited Anchorage
25° 08'
Freighter Anchorage
DAS ISLAND
52° 52'
52° 53'


1 Prefecture Port Office
2 Customs
3 Hydrography
4 National Port Administration
5 Company Alimar S.A.
6 Ramp
7 Two Ramps
8 Messrs. Belt & Dodera S.A.
9 Overseas Quay
10 Coastal Quay
11 Union Quay
12 Tourist Ferry Terminal
13 National Port Admin. Warehouses
14 Main Entrance to Port Area
15 Entrance to Port Area
16 Sunken Vessel
0m
300m
Soundings in Metres
Port Entrance
Port Entrance
Free Zone
Ferry Terminal
Customs
Port Admin.
Union Quay
Ramps
Ramp
Coastal Quay
Overseas Quay
Green Flashing Light
Wreck
COLONIA
FREE ZONE PORT
White Flashing Light
Red Flashing Light
Breakwater


Amana
I. Palo Solo
Rio Orinoco
Canal El Fraile
Puerto de San Felix
San Felix
I. Fajardo
Puerto de Palua
Canal Palo Solo
Paso Fajardo
Pto Ordas
Rio Caroni
Oil Terminal
Interalumina Terminal
Alcasa Terminal
Vencemos Terminal
Venalum Terminal
El Fraile
San Felix
MATANZAS-SAN FELIX AREA
Puerto de Matanzas
Matanzas
Palo Solo
Amana